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ABSTRACT

The major purposes of this evaluation were to: (1) assess the effectiveness of the Individual Referral (IR) program in providing training in broadening occupational choices and in making institutional training available to enrollees in areas where class-size projects are not feasible; (2) develop comparable data on such items as trainee characteristics, staff qualifications, program costs, and performance information to make valid comparisons with data from other sources; (3) determine the availability and effectiveness of counseling and other supportive services; and (4) identify exemplary programs and practices suitable for replication. To fulfill these purposes, interviews were conducted with appropriate officials of the Departments of Labor and of Health, Education and Welfare and with appropriate state officials. In addition a review was made of records relating to IR programs in 12 states and on-site visits to 92 IR institutions. Some general conclusions were: (1) the IR program provides a wider range of occupational offerings (mainly for men) and a longer training period, at a lower cost to the federal government, than any other form of training; and (2) the approach to training is traditional "locked-step" rather than individualized and lacking in innovative features. (SB)

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EVALUATION OF THE MDTA INSTITUTIONAL INDIVIDUAL REFERRAL PROGRAM

Final Report
June 1972

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PREPARED FOR

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We found that local private and public school administrators, together with local and state employment service (ES) staffs, from whom we received warm and open reception, exhibited a sincere desire to cooperate with us in the resolution of community problems in line with MDTA objectives.

The total effort invested by participants in all segments of the IR program is highly commendable. In terms of the study, it permitted the ORC team in many cases to almost double the sample originally planned, thus making the study more meaningful and viable.

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Chapter One

Summary and Conclusions of an Evaluation

The Olympus Research Corporation (ORC), in its evaluation of the Manpower and Development Training Act (MDTA) Skills Centers, observed that the Skills Center concept should be viewed as a concept in transition and that the Skills Center goal should be the integration of remedial education and training into the mainstream of employment preparation and take enrollees from where they are as far as they have the potential to go. This goal cannot be realized, however, until existing institutions, both public and private, are willing and able to serve the disadvantaged clientele now being served by most Skills Centers and other federally sponsored manpower programs.

Since the passage of MDTA in 1962, there have been major improvements in the nation's system of post-secondary vocational education. New systems of vocational-technical institutions and community colleges, as opposed to the more academically minded junior colleges, have been established in many states and some large metropolitan areas. Most of these schools have fine facilities and equipment and relatively large budgets (in comparison to MDTA's modest appropriations for administration, instruction, and supplies). The question remains, however, as to whether these institutions are designed to serve total community needs, including those members of the community who suffer from economic, educational, social, and cultural deprivation. To the extent that this question can be answered in the affirmative, the need for Skills Centers and other special programs decreases. In fact, until this goal is met, the vast majority of the "disadvantaged" will not be served at all; federal allocations for institutional training can meet only a small portion of the total universe of need.

The Individual Referral (IR) program differs from other forms of institutional training in that it depends upon the willingness of existing educational institutions to accept applicants for MDTA training. If disadvantaged applicants are accepted, the program's success depends on whether or not school curricula are designed to meet the special needs of the disadvantaged. This assessment of the effectiveness of the IR program therefore is in part an evaluation of the willingness and ability of existing educational institutions, both private and public, to provide institutional training to all who can benefit from it, both the disadvantaged and nondisadvantaged.

The IR method of delivering institutional training is also designed to serve rural and other scarcely populated areas where class-size projects are not feasible and to make possible institutional training for applicants with special needs (veterans, handicapped workers, unemployed or underemployed workers who are either disinterested in or lack the qualifications for existing class-size projects).

CONCLUSIONS

Based on a review of all available records relating to IR programs in 12 states and on-site visits to 92 IR institutions, both private and public, ORC's conclusions are discussed below.

General

- The IR program is the only feasible means of delivering institutional training to applicants in most rural and/or scarcely populated areas.
- The IR program provides a wider range of occupational offerings (mainly for men) and a longer training period, at a lower cost to the federal government, than any other form of institutional training.
- The IR program is serving a less disadvantaged clientele than Skills Centers, multi-occupational projects (called "multi's" in this report), and other class-size institutional programs. The IR program is comprised predominantly of whites, females, high school graduates, heads of households, and primary wage earners. Far more underemployed, as opposed to unemployed, are enrolled in the IR program than in class-size projects.
- The approach to education in most IR institutions is traditional in nature, "locked-step" rather than "individualized," lacking in innovative features (such as the cluster approach and spinoffs), and lacking in remedial education, intensive counseling, and other supportive services.
- The facilities, equipment, materials, and supplies of IR institutions are on the average far superior to those of Skills Centers and other multi-occupational

projects, thus reinforcing the image of a dual educational system--a superior program for preferred enrollees, and an inferior one for the disadvantaged. This observation does not necessarily apply to the overall approach to education or the quality of instruction available in the two programs; in these areas, with respect to the disadvantaged at least, most Skills Centers are superior. However, the reasons why these tax-supported facilities are not available to all members of the community who are in need of institutional training are issues to which policy makers should give their attention.

- Despite the advances that have been made in post-secondary vocational education since the passage of MDTA, there is still a need in most communities for special programs, such as Skills Centers, designed to serve those who cannot qualify for admittance to or benefit from existing educational institutions or programs. There is a trend in some states and some schools to adapt existing programs to meet total community needs. However, this trend is not as yet sufficiently widespread to lead to the conclusion that the need for special programs has been significantly diminished. The class-size program remains the only alternative in most areas for disadvantaged enrollees to acquire institutional occupational training.

Performance

- The percentage of enrollees who complete courses (completion rate) is about the same for the IR as for the class-size program.
- The percentage of "completers" who are placed in jobs immediately after training (placement rate) appears to be much lower for the IR than for the

class-size program. However, ORC believes that IR placement information is the least reliable of all IR performance information. Those responsible for completing enrollee termination forms (MA-102s) often do not know whether the enrollee is employed, or about to be employed, and do not consider placement the function of the training institution. As a result, the placement section of the MA-102 is often incorrectly filled out, or not filled out at all.

- The percentage of attempts to contact completers at three- and six-month follow-up intervals is about the same for the IR as for the class-size program. However, the IR program is between 10 and 18 percent more successful in actually contacting completers, and between 12 and 14 percent more IR completers are found to be employed three to six months after training than completers of class-size projects. It appears, therefore, that the post-training experience of IR completers is more successful than that of class-size completers.

Administrative

- The process for clearing the Individual Certification for Manpower Training (Form MT-3) is laborious and cumbersome in most of the sample states. In some instances, the routing has taken as long as five months; in almost all instances, excessive clearance procedures cause serious delays, resulting in many cases in loss of interest by the trainee and/or loss of training slot availability. Five of the sample states, although following the same basic routing procedure, have adopted various methods to expedite the process (see Chapter Three). These states have not only improved the efficiency of their overall program but are also providing better service to applicants for MDTA training, and in most cases, have improved relationships between employment service (ES) and vocational education agencies.

- One of the most abrasive conflicts between school and MDTA administrators is the requirement that MDTA enrollees receive eight hours of instruction per day, whereas the average regular training period for IR schools is only 6.3 hours. School administrators and instructors believe that this is an unnecessary regulation. Most, but not all, of the schools attempt to accommodate MDTA regulations by requiring IR enrollees to attend one- to two-hour special "laboratory" or "study" sessions. This causes considerable resentment on the part of IRs, not only because of the extra hours they spend in school, but also because it exposes them as "special students" to the remainder of the student body.

Private and Public Schools

- The entrance requirements for private schools are stricter than those for public schools. Of the private schools surveyed, 50 percent reported that a high school diploma was required or preferred for acceptance into the institution. Only 26 percent of the public schools surveyed required enrollees to have a high school education. Fourteen public schools (in addition to six special IR programs administered by public schools) reported no entrance requirements.

- Only 35 percent of the private schools surveyed included basic education in their curricula (none of which could be considered remedial). Of the public schools, 83 percent include basic education in their curricula, the vast majority of which is nonremedial. Remedial education was featured only in programs created specifically for IRs.
- Sixteen public and 17 private schools (of a total of 92, equally divided between public and private) are open ended (that is, trainees can be enrolled at any time during the school year and terminated whenever they have become "job ready").
- The average length of training in private schools is 39 weeks; the corresponding figure for public schools is 56. The average hourly schedule for private schools is 6.1 hours per day; for public schools, 6.4.
- Of the 46 private schools surveyed, 34 do not employ counselors; 43 of the public schools do.

SUMMARY

The following discussions concern themselves with the four major chapters of the report: the system (IR administration), the enrollee, the program, and the record.

IR Administration

Allocations for the IR program are growing at a rate double that for all MDTA training, both institutional and on-the-job training (OJT), and are increasing at a rate slightly faster than that of all institutional training. Administrators at the national and regional levels know very little about the IR program, although they suspect that IRs are screening out the disadvantaged and may be subsidizing both private and public educational institutions. When allocations for IRs have been approved at the regional level, administration and control of the program are left to the individual states. State administration varies so widely that it is impossible to summarize the systems used (see Chapter Three). The results of monitoring and evaluation systems, however, if they exist, do not reach federal administrators.

The Enrollee

In its analysis of enrollee characteristics, ORC made comparisons between three sets of data:

- Characteristics of MDTA enrollees, broken out by program type (all institutional, Skills Center, and IRs), compiled by the Department of Labor's (DOL) Office of Financial and Management Information Systems (OMDS)
- Characteristics of IR enrollees during fiscal years 1969-71, compiled by ORC for 11 of 12 states included in the sample for this evaluation (IR sample)
- Characteristics of enrollees in all institutional programs, except IRs, for 14 cities, compiled by ORC in its "Evaluation of the Effectiveness of Institutional Manpower Training in Meeting Employers' Needs in Skills Shortage Occupations" (skills shortage sample)

The following conclusions can be drawn from these comparisons:

- IRs show fewer enrollees unemployed than do Skills Centers. They also show fewer enrollees not in the labor force than do skills shortage cities.

- Enrollees in the IR program have more formal education than trainees in other forms of institutional training. The IR program has 10 to 20 percent more high school graduates than other institutional programs.
- The IR program is predominantly white. According to the IR sample, whites comprised 77.4 percent of the enrollment in fiscal years 1969-71; the national figure for 1971 was 71.4 percent. Whites made up only 44.7 percent of fiscal year 1971 Skills Center enrollees and 52.1 percent of skills shortage enrollees.
- The IR program is predominantly female. Slightly more than 58 percent of the enrollees in the ORC sample are women, as compared to 40 percent of the enrollment in Skills Centers and about 47 percent for skills shortage enrollees.

To sum up, IR enrollees appear to be less disadvantaged than enrollees in other types of institutional training. Interviews with 244 IR enrollees support this contention. Most of the trainees interviewed were white high school graduates who had very little difficulty in getting along in traditional settings. Their major problems were financial rather than educational, social, or cultural. Administrators of IR institutions stated that there were no substantial differences between IRs and regular students.

The Program

ORC's evaluation of the IR program is based on visits to 92 schools (46 public and 46 private). The size of the schools varied from seven to more than 8,000 students; the number of IRs enrolled ranged from one to 87. The vast majority of the schools (87) assign enrollees to regular ongoing classes; only five place IRs in special classes--for IRs only. Of the 92 schools, 87 require that IRs meet the same entrance requirements as regular students, although 14 of the 92 may waive entrance requirements on the recommendation of ES counselors.

Curriculum

In the vast majority of the schools visited, and for most occupational offerings, curricula are realistically attuned to industry needs, are well organized and presented, and are carried out in good to excellent facilities with fair to excellent equipment. The manner of presentation, however, is traditional in nature, featuring a locked-step rather than individualized approach. This is true of both public and private schools.

Special Components

ORC attempted to determine whether special components, approaches, and techniques which appear to be successful in training the disadvantaged are being employed in institutions to which IRs are referred. The results of this analysis are as follows:

- Orientation: Less than one-half of all the schools visited provide orientation to new enrollees; only five of the schools that do provide orientation, excluding two Skills Centers and one Prevocational Center, have programs which run in excess of one day.
- Prevocational Training: Only 14 of the 92 schools provide prevocational training. Three of the 14 are Skills Centers, and one is devoted exclusively

to prevocational training. Of the remaining ten, only one has a formal work-sampling program.

- Employability Training: Most of the schools (85 percent) have "world of work" programs, although these programs are more apt to be conducted in private than in public schools.
- Basic Education and General Education Development (GED): Basic education is included in the curricula of 60 percent of the courses reviewed by ORC. However, only 35 percent of the private schools provide basic education as compared to 83 percent of the public schools. The same pattern is true of GED training; only two private schools provide GED preparation, whereas 22 of the public schools conduct GED programs. The absence of GED training is partially due to the high percentage of high school graduates participating in the IR program.
- The Cluster Approach: Only 17 percent of the schools visited use the cluster approach. An additional 20 schools are in the process of developing curricula based on clusters, but mainly in office occupations.
- Spinoffs: About 33 percent of the schools design courses around performance objectives, allowing trainees to seek employment after completing one or more objectives or go on to higher objectives. This figure is probably somewhat inflated as many institutions equate spinoffs with early completions.
- Open-Entry/Open-Exit: Only 33 of the 92 schools (17 private and 16 public) operate on an open-ended basis. Eleven of the open-ended schools are in two states, Tennessee and Louisiana.

- Individualized Instruction: Approximately 36 percent of the schools visited (most of them the same schools as those that employ the open-entry/open-exit approach) are either formulating or have formulated individualized instruction programs. Only a few schools, however, have what could be termed legitimate programs, using advanced software and hardware.

Counseling and Supportive Services

Counseling is not considered as important or necessary a function in IR institutions as in Skills Centers. IRs have fewer attitudinal and motivational problems than Skills Center enrollees, with fewer incidents of tardiness and absenteeism. Of the 92 schools, 37 do not employ counselors. In schools where counselors are employed, their major role is to provide "career guidance" not intensive "personal counseling" or related supportive services. The term "supportive services" is not understood by most of the administrators and counselors interviewed by ORC. The term seems to be associated solely with poverty programs, and most IR counselors and administrators do not believe that they are participating in a poverty program. ES counselors note that IRs need and receive less counseling than other MDTA enrollees.

Program Performance

Sixty-five percent of all IRs complete their courses, and if they stay in the labor market after completion (10 percent do not), their chances of finding training-related jobs are good. The length of training in the IR program is longer than in other types of institutional training, as is the period between completion and placement on the job. Post-training employment is higher for IRs than for enrollees in other types of institutional training.

Program Costs

ORC's major findings regarding program costs are as follows:

- With respect to federal funds allocated for educational costs under MDTA, the IR program has a better cost effectiveness record than class-size institutional training. Class-size programs, however, must pay their own way, whereas the IR program makes heavy use of existing public schools which do not bill MDTA for the full cost of training.
- In terms of the full cost to the American taxpayer of achieving the objectives of the institutional training program, however, ORC's conclusions are as follows:
  - Based on an analysis of the operating budgets of ten public, post-secondary vocational schools (located in the South and Midwest--low- to medium-cost areas), the average per man-year cost of training is higher in public schools than in either private schools or MDTA Skills Centers (see Chapter Six).
  - With this analysis as a base, it appears that IR training is more costly in public than in private schools.
  - The costs of Skills Centers and other class-size projects fall between public and private school IR training.

The range of these cost differences, however, is relatively narrow and insignificant. Thus, nonfinancial considerations could be more important than "program costs" in policy decisions regarding allocation of funds by program type.

- The range of cost effectiveness rates within each program type (state-by-state IR programs, Skills Center by Skills Center, and city-by-city class-size projects) is extremely wide, indicating that existing overall cost effectiveness rates could be improved.

The Record

ORC's analysis of the effectiveness of the IR program covered three general topics: (1) range of occupational offerings, (2) performance information, and (3) cost effectiveness measurements. The major findings are discussed below.

Occupational Offerings

The range of occupational offerings of the smallest IR program in the 12-state sample is wider than that of the largest Skills Center or metropolitan program. The average IR program provides twice as many occupational offerings as the average Skills Center (for the same number of enrollees) and eight times the number of individual courses offered in the average metropolitan area included in the skills shortage sample. The concentration of IR enrollment, however, is in three predominantly female clusters (62 percent): clerical and sales, health, and cosmetology. Other pertinent points are:

- A total of 2,000 women are enrolled in only a dozen specific occupational training programs.
- Approximately 1,600 men are enrolled in 177 specific occupational offerings.

- A total of 63 percent of all IRs are concentrated in white-collar occupations; one-half of all individual occupations in the IR program are included in the white-collar category.
- In Skills Centers and other class-size projects, the concentration of enrollment is in blue-collar trades; the number of specific occupations is smaller in the blue-collar than in the white-collar category.

Thus, although the spread of occupational offerings in the IR program is much wider than in other types of institutional training, the concentration of enrollment, though in different clusters, is almost the same (63 percent white collar for IRs; 58.6 percent blue collar for Skills Centers).

Chapter Two

Introduction

The MDTA institutional training program is currently undergoing a comprehensive series of evaluations. Analyses of MDTA systems, Skills Centers, the relevance and quality of all forms of institutional training, the basic educational program, a follow-up study of MDTA enrollees, and the effectiveness of MDTA in meeting employers' needs in skills shortage occupations are in the process of being, or have been, completed. This study examines the IR program of MDTA.

BACKGROUND

The IR program, though a small protion (10 percent) of all MDTA institutional training, is a unique method of delivering skill training to MDTA applicants. Rather than establishing new courses or creating new institutions designed specifically to serve MDTA applicants, the IR program uses existing educational facilities, both private and public, as referral sources for individuals in need of skill training.

Although most IRs occur in geographically large rural states, they are increasing at a faster rate than other forms of MDTA training (both institutional and

OJT) in most areas of the country, including urban areas. The reason for the high use of individual referrals in rural areas is clear: The small populations with accompanying slot limitations make it difficult to launch class-size projects. However, the major reason for the increasing popularity of IRs in other areas is quite different: ES personnel believe that the IR method makes it easier to meet specific needs of individual applicants. Each potential enrollee can be referred to the kind of training most suited to his (or her) needs. For example, the Skills Center evaluation revealed that 76 percent of Skills Center enrollees are in seven occupational clusters, and more than 70 percent of the women are enrolled in two clusters. Theoretically, by use of the IR method, existing private and public institutions can be used to provide a much wider variety of occupational offerings.

One reason for the limitation of occupational offerings in regular MDTA is that each course offering must meet the "reasonable expectations of employment" requirement. Whereas it might not be possible to expect 25 or more enrollees to find employment in a given occupational area, it might well be reasonable to expect one or two persons to do it. Also, institutions (such as Skills Centers) sometimes suffer from lack of flexibility--once a Skills Center or "multi" has been instituted, its stability depends on its ability to guarantee a certain amount of employment to instructors and other personnel and to use fully its capital equipment. Constant changes in course offerings would make stability impossible and would necessitate constant new purchases of capital equipment and the storage of equipment no longer in use. By making use of existing training facilities, the IR method appears to guarantee flexibility.

Conversely, it has been charged that the IR program works only with preferred applicants or with applicants who can complete a training course without extensive supportive services and who meet the entrance requirements of various private and public institutions. Regular MDTA institutional projects must accept all applicants, regardless of their qualifications or lack of qualifications. Thus regular MDTA institutional training offers not only occupational training but basic education, intensive counseling, and a host of supportive services not necessarily provided by institutions which receive individual referrals.

All of the foregoing, however, is primarily conjecture. Until now, comparisons between regular institutional training and the IR program have not been possible because an evaluation has not been made of the latter. The major purpose of this project is to provide a comprehensive evaluation of the IR program.

PURPOSES AND OBJECTIVES

The five major purposes of this evaluation, as stated by DOL, are as follows:

(1) To assess the effectiveness of the IR program in broadening occupational choices

(2) To evaluate the effectiveness of the IR program in making MDTA institutional training available to enrollees in areas where class-size projects are not feasible

(3) To assess the quality and effectiveness of the training provided through the IR program

(4) To develop comparable data on such items as trainee characteristics, staff qualifications, program costs, and performance information to make valid comparisons with data from other sources

(5) To determine the availability and effectiveness of counseling and other supportive services for the IR trainees

(6) To identify exemplary programs and practices suitable for replication

To fulfill these general purposes, ORC agreed to perform the specific work assignments discussed below.

National Office Survey

ORC conducted interviews with appropriate officials of DOL and the Department of Health, Education and Welfare (HEW) to gain insights into the leadership and management of the IR program and to examine and review pertinent national guidelines and office data regarding the IR program.

State Office Surveys

ORC also conducted interviews with appropriate state officials:

(1) To determine the extent to which IRs are used within the states, the areas served, and the occupational offerings certified, and to gain insights into the attitudes and opinions of state supervisors

(2) To review the operational process under which the IRs are made, including the identification of occupations, the certification of training, and the extent to which programs are monitored and evaluated by the state officials

(3) To determine the efficiency and effectiveness of the IR operation

(4) To draw a sample of training sites to be visited, representative of private and public institutions, in which a variety of courses is offered

Analyses of Occupational Offerings

A complete list was compiled of all occupational training offered by means of the IR program to determine the following:

(1) Are applicants in the IR program enrolled in the same courses offered through other MDTA institutional projects?

(2) Is training available through the IR program not available in regular MDTA institutional projects; and to what extent, if any, does the IR program make possible a wider variety of occupational offerings?

Quality of Training

Based on evaluations of a minimum of four institutions per state representing both private and public schools in 12 states, ORC assessed the quality of IR training with regard to the following questions:

(1) Is basic education available for those who may need it?

(2) Is the cluster approach used?

(3) Is on-site counseling available?

(4) Are the equipment and facilities adequate, and how do they compare with the equipment and facilities used in class-size projects?

(5) Are supportive services available to enrollees who need them?

(6) What teaching approaches are used; e.g., individualized instruction?

(7) What are student/instructor ratios?

(8) Are course offerings realistically geared toward industry needs?

(9) If MDTA trainees are "disadvantaged," is their progress affected either favorably or negatively by being enrolled in classes which are made up primarily of "nondisadvantaged"?

Characteristics of Enrollees

The characteristics of IR enrollees with Skills Center enrollees were compared.

Cost Breakdowns

Cost breakdowns were determined, including the following:

(1) Resource allocations

(2) Staff allocations

(3) Cost information

  (a) Projected and actual costs per man-year of training
  (b) Cost per completer
  (c) Cost per placement
  (d) Cost per enrollee

Performance Information

The following were determined:

(1) Attendance rates

(2) Completion and dropout rates

(3) Placement rates

(4) Follow-up information

(a) Number researched
(b) Number contacted
(c) Number of contacted employed at three- and six-month intervals
(d) Number employed in training-related jobs

METHOD OF OPERATION

The IR evaluation was conducted on a statewide basis in the following 12 states:

Alaska
California
Connecticut
Louisiana
Minnesota
Missouri
New York
North Dakota
Tennessee
Utah
Washington
Wisconsin

The specific methods ORC used to carry out the objectives of the evaluation are either described in the succeeding chapters or can be discerned from the actual presentation of material. Several factors regarding the size and nature of samples used in the report, however, are important for a full understanding of the material presented.

- The 12 states included in the IR sample used 50, 40, and 42 percent of the total funds allocated for IRs in fiscal years 1969, 1970, and 1971, respectively.
- Cost data and performance information are based on the vast majority (85 percent plus) of trainees enrolled in the IR program in the 12 states in fiscal year 1970, with the single exception of New York, where the sample is approximately 40 percent of the trainees enrolled in fiscal year 1970. The total sample amounts to approximately 3,700 enrollees.

- Enrollee characteristics data are based on national computer tape records of 3,818 trainees enrolled in the 12 states in fiscal years 1969-71.
- Program data are based on visits to 92 training institutions and interviews with 244 enrollees, more than 100 administrators, 87 classroom instructors, and 55 school counselors.
- Program administration findings are based on data obtained from departments of vocational education and departments of employment in all 12 states. In addition, interviews were conducted with the staffs of 16 local ES offices and a variety of program administrators at the national level.

The report that follows is a detailed description of ORC's findings and conclusions. Chapter Three describes the system and its administration. Chapter Four focuses on the enrollee: Who is he and how was he selected? Chapter Five concerns itself with the quality of the program. Chapter Six reviews performance data, including the range of occupational offerings, completion and dropout rates, placement rates, and follow-up information. It also provides a cost breakout of the IR program and compares IR costs with other forms of institutional training. Chapter Seven describes some of the more interesting programs found in the various states, programs which may be worthy of replication elsewhere. Statistical data not used in the main report are contained in the Appendix.

Chapter Three

The System

The process for approving regular institutional programs, whether they be multi-occupational or individual projects, is quite clear. ES prepares an MT-1, or a proposal for a training project, and transmits it to the state department of education whose personnel in turn prepare Form 3117, or a proposed budget for the educational costs, and designate the training agent. The entire package is reviewed at the regional level and if approved, is funded.

The process for approving IRs, however, is not so clear. Allocations for IRs are approved at the regional level, but the projects themselves are approved at either the state, the area, or, in a few cases, the local level. The basic form is the MT-3 (Individual Certification for Manpower Training) which is initiated by ES and then sent to the department of education for training costs and designation of the training agent. In actual practice, however, both the training costs and the training agent may be decided at the local level, either by ES, local education officials, or both. Area and/or state approval is often merely a rubber-stamp process. Furthermore, because the MT-3 is a proposed training program for a single individual, ES is not required to justify the program through supply and demand analyses, as it must for class-size projects.

Thus the IR system is more flexible in that the states can establish their own processes for the approval of IRs, and these processes may vary widely from one state to another. It is the opinion of several administrators at the national level that one of the reasons many local and state officials prefer IRs over class-size projects is that IRs require less justification and less monitoring and evaluation.

ORC's national and state surveys were designed to ascertain the following:

- National trends regarding the use of IRs by the states in comparison to: (1) other forms of institutional training and (2) all types of MDTA training (including on-the-job training)
- Rationales for the distinction between IRs and other forms of institutional training and the allocation of funds for IRs as opposed to multi-occupational and other class-size projects
- Rationales for the designation of training institutions, especially private schools
- The processes for approval of IRs
- The processes for monitoring and evaluating IR programs
- Local and state preferences regarding the IR program and other forms of institutional training

NATIONAL TRENDS

The IR program was examined over a three-year period--fiscal years 1969-71. National and state records regarding both dollar and slot allocations were reviewed to determine the mixes and trends of institutional and noninstitutional programs funded under MDTA.

There is relatively close correlation between funds allocated at the national level for IRs and state funds budgeted or expended, but there is little or no correlation between the national allocation of slots and actual slots used by the states. The reason for the latter mismatch is one of pure semantics: the lack of a uniform definition of training slot. Over the past three years, there has been a trend toward defining the term "slot" as "one man-year" of program services; i.e., regardless of how many individuals fill a "slot" during a 12-month period, the net result is the provision of 12 man-months (or one man-year) of training. In many states, however, the term "slot" is equated with "individual trainee." Thus, total slots would equal the total number of trainees served by the program. The result is utter confusion. For example, if "slot" is equated to the individual trainee, programs of short duration--or programs with high dropout rates--would have more training slots than programs of long duration or those with low dropout rates. That is, (1) a class-size project for 30 individuals may last only 10 weeks, yet be considered to have 30 slots; (2) an annualized Skills Center may be reported as having a 200-slot capacity, yet serve 600 individuals during any given year; and (3) a single IR may be considered one slot, yet the enrollee who fills that slot may be placed in a program which lasts from six weeks to two years.

ORC was forced to abandon the use of slots as a measurement of program utilization. For those interested, a presentation of dollar and slot allocations for all MDTA programs (institutional and noninstitutional) is in the Appendix.

Difficulties also arose when attempts were made to measure program utilization by the amount of funds allocated over the three fiscal years because yearly allocations were extremely erratic for some states. For example, California's IR allocation decreased from \$4.3 million in fiscal year 1969 to \$1.2 million in 1970, but leaped to \$5.4 million in fiscal year 1971.

Actually, these changes are not as erratic as they appear; e.g., in California the decrease between fiscal years 1969 and 1970 was due mainly to the state's using unspent 1969 funds in fiscal year 1970. The apparent increase in fiscal year 1971 therefore is not so large as it appears to be. There is, however, an increase in California of more than \$1 million in IR funds between 1969 and 1971. This increase was due to the allocation of more funds for IRs because of delays in initiating class-size projects in fiscal year 1971.

In New York, the decrease in IR funds between fiscal years 1970 and 1971 was due to a cutback in state funds for institutional training programs, thus forcing the state to use federal funds (which had in the past been used for IRs) to maintain the state's class-size programs.

Table 3-1 summarizes national data and shows the following:

- Dollar allocations for the IR program are increasing at a slightly faster rate than allocations for all institutional programs.
- While allocations for all institutional programs are increasing at a faster rate than total MDTA allocations, the growth of the IR program is approximately twice that of all MDTA allocations.

TABLE 3-1

Growth Trends of National HEW and Total Allocated MDTA Program Funds (Fiscal years; thousands of dollars)[a]

Program/Type of Obligation	Amount for 1969	1970		1971		Change for 1969-71[b]
		Amount	Change for 1969-70	Amount	Change for 1970-71	
National IR programs:						
HEW	$ 5,918	$ 7,673	30%	$ 9,050	18%	53%
DOL/HEW	22,248	27,609	24	33,562	22	51
All national institutional programs:						
HEW	104,600	139,500	33	144,200	3	38
DOL/HEW	213,505	289,031	34	275,467	-4	29
All national MDTA programs:						
DOL/HEW	272,616	336,580	23	335,752	0	23
TOTAL of 12-state sample IR programs:						
HEW	3,173	2,610	18	4,095	57	29
DOL/HEW	$ 11,032	11,118	1	13,928	25	26
Percent of national IR funds allocated to 12-state sample						
DOL/HEW	49.6%	40.3%	-18.8%	41.5%	3.0%	-16.3%

[a] Data Collected by Olympus Research Corporation.

[b] Average of three percentage changes (columns 5, 6, and 7).

- IR allocations for the states included in the sample for this evaluation are not increasing as fast as IR allocations for the remainder of the country. IR growth rates in these states are about the same as the national growth rate for all institutional programs. This is probably because between 40 and 50 percent of all IRs occur in the sample states.

The table also reveals that although HEW allocations are about equal to DOL allocations in all institutional programs, they are approximately one-third less than DOL allocations in the IR program. The reasons for this discrepancy will be dealt with in detail in Chapter Six; we merely point out here that public schools involved in the IR program do not charge MDTA the full costs of training, thus reducing HEW's share of the overall costs.

Table 3-2 shows that although funding for IRs is erratic in individual states, national figures remain relatively stable. Over the three-year period, there has been a 51 percent increase in funds allocated for IRs as compared to a 29 percent increase for all institutional programs. However, the percentage of all institutional funds allocated for IRs has increased by only 1.8 percentage points. In the 12 sample states, the increase in funding for IRs has been the same (29 percent) as the increase nationally in all institutional programs, and the percentage of all institutional funds allocated for IRs has increased by less than one percentage point.

DOL and HEW administrators at the national level have mixed feelings about the growth of the IR program. National administrators have very little control over the IRs; whatever federal control exists is at the regional level where allocations for IRs are either approved or disapproved. When allocations have been

TABLE 3-2

Federal MDTA-Institutional Obligations
(By fiscal year; thousands of dollars)[a]

State	Total Obligations (MDTA-Institutional)			IR Obligations			IR Obligations as Percentage of Total		
	1969	1970	1971	1969	1970	1971	1969	1970	1971
Alaska	$ 1,152	$ 1,990	$ 2,031	$ 277	$ 282	394+	24.0%	14.2%	19.4%
California	30,239	30,830	31,501	4,340	1,152	5,385	14.4	3.7	17.1
Connecticut	1,037	2,875	3,229	400	480	292	38.6	16.7	9.0
Louisiana	2,814	3,570	3,870	461	544	729+	16.4	15.2	18.8
Minnesota	3,918	5,212	6,224	792	1,218	860	20.2	23.4	13.8
Missouri	4,274	6,116	6,533	510	1,012	653	11.9	16.5	10.0
New York	19,132	20,362	22,228	655	2,231	1,361	3.4	11.0	6.1
North Dakota	988	759	681	239	658	500	24.2	86.7	73.4
Tennessee	3,690	4,609	4,475	912	589	792	24.7	12.8	17.7
Utah	1,061	1,467	2,266	269	253	337	25.4	17.2	14.9
Washington	3,068	4,206	4,127	1,326	1,493	1,495+	43.2	35.5	36.2
Wisconsin	4,418	4,355	4,685	851	1,206	1,130	19.3	27.7	24.1
12-state TOTAL	75,791	86,351	91,850	11,032	11,118	13,928	14.6	12.9	15.2
United States	$213,505	$289,031	$275,467	$22,248	$27,609	$33,562	10.4%	9.6%	12.2%

[a] Data collected by Olympus Research Corporation.

approved, the administration and operation of the program are left to the states. There is growing interest in the IR program at the national level because of its potential with respect to new manpower legislation, welfare reform, and the veterans' programs. DOL and HEW, however, express serious concerns about the program as it is now operating. Among these concerns are the following:

- Both DOL and HEW administrators fear that some public education systems use IRs to fill slots in existing courses and receive subsidies in the process. The question as to whether the public school or the applicant is being served is (to these officials) very much to the point. Thus, DOL administrators would like to know what the "hidden administrative costs" are in the public systems (see Chapter Six).
- With regard to private schools, DOL administrators question the schools' commitment to serving the disadvantaged or providing the kind of employability training envisioned by MDTA. These administrators say that, as with public schools, many private schools see IRs as a means of filling vacancies and increasing revenues.
- Both agencies complain that there is too much "selecting out" of applicants referred to institutions under the IR program. In other words, IR agencies are interested mainly in skimming the best of the applicant crop.
- HEW says that the lag time between referral and enrollment is too lengthy in many instances.

For the most part, national officials are frank to admit that they do not know much about the IR program. Most of the points listed above are merely educated conjectures; in other words, they cannot be documented from information available at the national level. One official put it this way, "We are secure in our ignorance." Another said, "The main problem is that I don't know what the problems are. We don't know enough about the system." Both DOL and HEW believe that the monitoring and evaluation system for the IR program should be strengthened. In fact, HEW maintains that the purposes and objectives of the program should be redefined and that a new monitoring system, based on specific purposes and objectives, should be established.

The approval of IR allocations at the regional level is not controversial in most regions. With the exception of a few states, IRs constitute only a small portion of all institutional training, and allocations are based mainly on population distribution. IRs are used primarily in rural or "balance-of-the-state" CAMPS areas, although growth in the IR program is due mainly to an increasing use of IRs in urban areas. In areas where Skills Centers or large multi's exist, however, IRs are relatively scarce.

RATIONALE FOR ALLOCATION OF IRs AT THE STATE LEVEL

Table 3-3 shows the slots allocated to the IR program in fiscal year 1972, the percentage of total institutional training allocated to the IR program, and the "percentage changes" between fiscal years 1971 and 1972 in each of the sample states. The range in slots allocated is from a low of 130 in Louisiana to a high of 1,282 in California. The range is from a low of 10 percent in New York to 59 percent in Alaska. Eight states have increased their use of IRs, two states have remained

TABLE 3-3

Individual Referral Slots
(Fiscal year 1972)[a]

State	Slots	Percentage of Institutional MDTA Training	Percentage of Change of IRs from 1971
California	1,282	16%	+ 7%
New York	543	10	+ 3
Washington	500	22	0
Missouri	458	22	+ 6
Wisconsin	395	26	+ 5
Minnesota	375	14	0
Utah	336	63[b]	+14
Tennessee	256	21	+25
Alaska	166	59[b]	+ 7
North Dakota	150	NA	NA
Louisiana	130	19	- 7
Connecticut	115	NA	-56%
TOTAL	4,706		
Average		26%	

NA = not available.

[a] Data collected from various state officials by Olympus Research Corporation.

[b] A high percentage of IRs go to Skills Centers.

the same, and two states have decreased their IR allocations. One state, Connecticut, has decreased its IR allocation by 56 percent. The inability of Connecticut's departments of vocational education and employment to reach agreement on key administrative matters is the major reason for this drastic reduction. The Connecticut situation is not typical of relationships between ES and vocational education agencies in other areas of the country. The pros and cons of the Connecticut controversy are not therefore pertinent to this report. It should be noted, however, that poor relationships between these two agencies have an adverse effect on the entire institutional program in Connecticut. Agency prerogatives rather than the welfare of MDTA applicants seem to be the key element in this jurisdictional dispute.

There do not appear to be formal or written criteria for the distribution of IRs throughout the various states or for distinguishing between the kinds of enrollees referred to the IR program as opposed to class-size projects.

In all 12 states, IRs are used in areas where class-size projects are not feasible. Only one state, Utah, has a formal method for the allocation of IRs. Data are developed in eight manpower planning districts (not CAMPS) and fed into a central state council. IRs are then fed back to the districts on a formula basis. Eleven states indicated that population distribution is a major factor in determining slot distribution. Various other factors, however, are also considered:

- Seven states take into consideration the percentage of disadvantaged in various areas.
- Five take rural/urban distribution into consideration; one state establishes specific rural/urban percentages (60 percent urban and 40 percent rural).

- Two states reduce IR allocations if other large projects, such as Skills Centers and multi's, are in operation in an area.

In answer to the question, "To whom do you allocate IR slots?" state responses were as follows:

- One state maintains control over IRs at the state level; allocations are not made to local or area offices.
- Four states allocate slots to local offices; in these states, allocations for class-size projects are also made to local offices.
- Six states allocate slots to area or district offices.
- One state allocates funds to local offices; in this state whether funds are used for IRs or class-size projects is left to the discretion of the local offices.

All states indicated that there is no specific policy regarding the characteristics of enrollees who are referred to the IR program. Theoretically, the 65 percent disadvantaged criterion applies to the IR program as well as to class-size projects. As will be noted in Chapter Four, the IR program is serving a less disadvantaged clientele. Based on observations in the field, the reasons for this are as follows:

- Schools have the final selection authority.
- The IR program lacks supportive services.
- The nature and sophistication of some of the occupational offerings excludes enrollees' class-size projects.

RATIONALE FOR DESIGNATION AND APPROVAL OF TRAINING INSTITUTIONS

The distribution of IRs to public and private schools varies widely among the sample states. Four states are predominantly private school oriented, six public, and two about even. Table 3-4 gives the distribution by state.

Criteria for approval and designation of training institutions are the responsibility of state departments of education in all 12 states. In six states, responsibility has been designated to divisions of vocational education (or adult education

TABLE 3-4

Private-Public School Distribution of IRs (By state)[a]

State	Percentage of Private	Percentage of Public
Alaska	2%	98%
California	84	16
Connecticut	90	10
Louisiana	92	8
Minnesota	23	77
Missouri	50	50
New York	90	10
North Dakota	42	58
Tennessee	24	76
Utah	10	90
Washington	35	65
Wisconsin	5%	95%

[a] Data collected by Olympus Research Corporation.

divisions). In the remaining six states, the licensing of private schools is required by state law. All private schools licensed by these states are eligible to receive IRs.

In five of the states where state licenses for private schools are not required, Veterans Administration-approved lists of training institutions are used. In four states, lists of approved schools are published for use by ES agencies; in two, state approval is required for each training institution proposed. One state, New York, enters into a blanket contract with a number of private schools for an indefinite period of time. The schools participating in this contract are considered eligible to receive IR enrollees. Written, well-defined criteria, especially for the IR program, exist in only four states: Wisconsin, North Dakota, Minnesota, and California.

THE PROCESS FOR APPROVAL OF IRs

MT-3 is the basic form for initiating an IR training program. Four states follow a somewhat inflexible and laborious procedure. The MT-3 is initiated at the local ES office then forwarded to the state ES office through the area office. Once approved at the state ES level, it is transmitted to the state department of education where it goes down the line through channels, then back to the state office for final approval. The form is then sent back to the state ES where it is sent through the area ES office to the local office. The applicant cannot be enrolled until the MT-3 is returned to the local office. In some instances, the routing has taken as long as five or six months; in almost all instances, excessive clearance causes serious delays, resulting in many cases in loss of interest by the trainee and/or loss of training slot availability.

Five states, although following the same basic routing procedure, have adopted various methods to expedite the process. The most common is to permit the local ES office to designate a training institution that appears on an "approved" list. A telephone call can be made to determine whether funds are available. If so, the trainee can be enrolled immediately, and the MT-3 can be completed after the fact. In one state, the funding decision is also left up to the local office; in another state, however, education officials complained that ES "has usurped our responsibility" and are in the process of trying to regain it.

Two states (in addition to the state mentioned above which has delegated approval of MT-3s to local ES offices) have departed from the standard processing completely. They have devised local forms for use by local ES and vocational education agencies (or schools), which provide for school approval and acceptance prior to submission to higher levels. The MT-3 is completed after the applicant has been enrolled. In one of these states, the MT-3 is completed at the state rather than at the local level.

Those states which have simplified the MT-3 process have not only improved the efficiency of their overall programs, but they have also been providing better services to their applicants for institutional training, and in most cases, have greatly improved relationships between state ES and vocational education agencies.

THE PROCESS FOR MONITORING AND EVALUATING IR PROGRAMS

The monitoring of training institutions is the responsibility of vocational education in all 12 states. Only five states have strong monitoring programs, including regular evaluation visits to training institutions. Two of these use outside resources to perform program evaluations. The most noteworthy is the Minnesota system which utilizes two ambitious instruments of accountability: For evaluations, every two years a team of up to 80 specialists from private industry does an intensive on-site evaluation of each school's program. On alternating years, the schools perform thorough self-evaluations designed by the state. In addition, Minnesota has instituted a new follow-up system for all area vocational-technical schools. The system has been contracted at an initial cost of $70,000 to a research group from the University of Minnesota. Data are gathered through mailings to schools, students, and employers. The computer runs include performance data by occupation, schools, and area. Unfortunately, however, they do not break out IRs from class-size projects.

The monitoring and evaluating systems for seven of the states are either nonexistent or extremely weak. These states rely for the most part on input from other agencies (Veterans Administration, Work Incentive Program (WIN), Concentrated Employment Program (CEP), ES, etc.) or merely react to problems or complaints as they emerge. The universal reason given for weak monitoring and evaluation systems is "shortage of staff."

LOCAL AND STATE PREFERENCES:
IRs vs. CLASS-SIZE PROJECTS

ES local office personnel are generally more favorably inclined toward IRs than state, ES, or education officials. Local office preference is based on "greater flexibility in meeting the needs of individual applicants." No one suggested, however, that class-size projects should be eliminated. Because of its ability to provide specialized services (basic education, supportive services, individualized instruction, etc.), class-size training is felt to be necessary.

State ES and vocational education officials were asked their opinions as to whether the IR portion of the total institutional training program should be increased or decreased. The responses were nearly identical from both agencies. Six ES and six state department of education officials felt that IRs should be increased; one state, North Dakota, would prefer to have 100 percent IRs. Six state department of education and five ES officials felt that IRs should neither be increased nor decreased. In only one state, Connecticut, did the ES feel that IRs should be decreased.

The same officials were asked their opinions about the relative cost effectiveness of the IR system. Three felt that the IR program has a better cost effectiveness record than class-size programs, five felt that IRs are less effective than class-size projects, and four felt that the cost effectiveness ratings for the two programs are about the same. With but few exceptions, these officials share the same opinions about the IRs, and the vast majority are favorably inclined toward the program.

Chapter Four

The Enrollee

One of the most serious charges made against the IR program is that because it depends upon purchasing training from public and private vocational schools and junior or community colleges, it is bound to be a "skimming operation," of use only to applicants who possess characteristics (educational, motivational, and aptitudinal) which are prerequisites for entrance into, and successful completion of, courses conducted by these types of institutions. If existing training institutions designed their programs to serve the total community (the disadvantaged as well as the nondisadvantaged), the IR program would probably be the best system for delivering institutional training, and the need for class-size projects, multi's, and Skills Centers would be eliminated.

ORC's examination of the characteristics of trainees enrolled in the IR program attempts to determine and document the differences between IR enrollees and those enrolled in Skills Centers and other types of class-size projects. Two sources of data are used in this analysis. The first is information extracted from MA-101s obtained from DOL's Office of Manpower Management Data Systems

(OMMDS). ORC provided OMMDS with a list of IR project numbers for 11 of the 12 states.[1] OMMDS searched its data files for enrollee records available for the listed projects and sent ORC a tape containing the requested information. ORC used its own computer facilities to extract and tabulate the data.

The second is a sample of 244 enrollees interviewed by ORC staff in the field. These data, in addition to selected demographic characteristics, are used primarily to identify the routes through which trainees enter the program and their attitudes and opinions regarding the training offered. For a detailed breakdown of enrollee characteristics summarized in this chapter, see Appendix Tables A-2 through A-4.

NATIONAL AND ORC SAMPLE CHARACTERISTICS

DOL's Office of Financial and Management Information Systems (OMDS) has prepared a tabulation of characteristics of MDTA enrollees during fiscal year 1971. This tabulation displays enrollee characteristics by program type, including IRs. ORC used this tabulation as the national standard for all IRs against which to check the representativeness of its own 11-state sample.

The 11-state sample conforms closely to the national pattern in all but two characteristics. The ORC sample shows 6.7 percent more enrollees below the poverty level, but 12.5 percent fewer blacks. Despite the fact that both of these characteristics are criteria for determining disadvantaged status, the "disadvantaged" check box on the MA-101s yields almost the same proportion of "Yes" responses for both sets of data.

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[1] The twelfth state, Tennessee, was added to the sample after the ORC request had been forwarded to OMMDS. Therefore, enrollee characteristics are not available for Tennessee.

The major reason for these differences is that the enrollee characteristics data ORC received from OMDS did not include fiscal year 1971 data for two of the sample's most urbanized states (California and New York). In the fiscal year 1970 tabulation for the 11-state sample, these two states ranked first and third, respectively, in the percentage of blacks enrolled. Undoubtedly, the exclusion of these states from the 1971 tabulation affected the basis for comparison.

ORC therefore made a comparison between characteristics for the 11-state sample in 1970 and the national figures. Again the match was remarkably close. The 11-state sample, however, showed higher percentages of "disadvantaged," "below poverty level," "public assistance recipients," and "high school dropouts"; on the other hand, there were fewer males in the ORC sample and fewer enrollees who had ten years or more experience in the labor force.

These comparisons are summarized in Tables 4-1 and 4-2. In general, it can be said that the ORC sample is representative of the national program. In only a few categories were the differences between the two sets of data more than five percentage points.

TRENDS: FISCAL YEARS 1969-71

In attempting to display trends in enrollee characteristics for the 11 states, ORC had to take into account several shifts in the data base. These shifts resulted from a combination of factors; e.g., over the three-year period, some of the states increased their IR programs at a rate faster than that of the overall sample. Second, ORC's attempt to arrive at a complete census of enrollees in all 11 states fell short of the goal. Consequently, there are gaps that might produce misleading conclusions when the year-to-year averages for the entire sample are analyzed.

To test the validity of changes in the total sample, ORC made summaries of individual state changes. Table 4-3 shows changes by state and comparisons between state changes and the overall sample changes. For each time period,

TABLE 4-1

Comparison of Eleven-State Sample
with National IR Data
(Fiscal year 1971)[a]

Characteristics[b]	Percentages		Percentage Point Difference
	Eleven States	National	
Income:			
Below poverty level	75.1%	68.4%	+ 6.7
Employment status:			
Underemployed	22.3	19.5	+ 2.8
Education:			
Twelve years plus	69.7	67.5	+ 2.2
Race:			
White	83.6	71.4	+12.2
Black	11.8	24.3	-12.5
Public Assistance:			
Yes	15.2%	18.0%	- 3.2

[a] Data collected by Olympus Research Corporation.

[b] With more than 2% difference

there are three states for which data are not available to compute year-to-year changes.

The results of this analysis are therefore inconclusive. The strongest correlation that exists between the overall and individual state changes is for the

TABLE 4-2

Comparison of Eleven-State Sample
with National IR Data
(Fiscal year 1970)[a]

Characteristics[b]	Percentages		Percentage Point Difference
	Eleven States	National	
Disadvantaged:			
Yes	73.5%	67.6%	+5.9
Income:			
Below poverty level	73.7	68.4	+5.3
Employment:			
10 years plus	14.5	17.1	-2.6
Education:			
Grades 9-11	31.1	26.7	+4.4
Grades 12 plus	62.2	67.5	-5.3
Race:			
White	73.7	71.4	+2.3
Black	22.0	24.3	-2.3
Public assistance:			
Yes	23.9	18.0	+4.9
Sex:			
Male	40.6%	46.9%	-6.3

[a] Data collected by Olympus Research Corporation.

[b] With more than 2% difference

TABLE 4-3

Year-to-Year Trends in Enrollee Characteristics (By state; fiscal years)[a, b]

State	Percentage of White		Percentage of Male		Percentage of High School Graduates		Percentage of Married		Percentage of Primary Wage Earners		Percentage of Head of Household		Percentage of Disadvantaged	
	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71	1969-70	1970-71
Alaska	X	X	X	+ 5%	X	+ 5%	X	- 8%	X	+13%	X	+24%	X	-20%
California	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Connecticut	-11%	+ 6%	-16%	+29	+10%	+17	-10%	+15	+15%	+ 5	+12%	-12	+ 4%	-21
Louisiana[c]	+60	- 3	-37	- 2	-26	- 5	-44	- 2	-16	+ 3	-22	+ 6	+18	+ 8
Minnesota	X	0	X	+18	X	- 2	X	+ 3	X	-10	X	- 2	X	+ 8
Missouri	X	0	-21	+21	+12	- 2	- 8	+14	- 5	+ 4	- 7	+10	- 2	- 6
New York	- 7	X	- 3	X	+ 9	X	-21	X	-17	X	-12	X	+12	X
North Dakota[c]	- 3	+ 2	+23	-16	-36	+19	-21	-10	- 3	+19	-35	+10	- 6	0
Utah	+37	0	+12	+ 3	0	+ 6	+24	- 3	- 4	- 4	+13	-14	-13	+ 6
Washington	0	- 6	+22	- 3	+ 2	+ 7	+ 7	- 4	+ 2	- 6	+11	-21	0	- 6
Wisconsin	+14	X	+15	X	0	X	+ 7	X	- 5	X	0	X	0	X
TOTAL	- 1%	+10%	+ 3%	+ 5%	+ 5%	+ 8%	- 3%	+ 4%	- 6%	- 2%	- 3%	- 3%	0	- 6%
Legend for state changes:														
+ = upward trend	3	2	4	5	4	5	3	3	2	5	3	4	3	3
- = downward trend	3	2	4	3	2	3	5	5	6	3	4	4	3	4
0 = under 1%	1	3	-	-	2	-	-	-	-	-	1	-	2	1
X = not computed; not available	4	4	3	3	3	3	3	3	3	3	3	3	3	3

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[a] Data collected by Olympus Research Corporation.
[b] For aggregate data
[c] Below 30 enrollment

characteristic "high school graduate." For both trend measurements, there is an increase in the number of high school graduates enrolled in the IR program. There are also indications of moderate decreases in the number of disadvantaged trainees enrolled.

The characteristic that appears to be showing a major trend in the aggregate data--increase in the percentage of whites enrolled--is not supported by changes that took place in the individual states. This is probably due to the lack of data (between 1970 and 1971) for three states with large, urban, nonwhite populations, (California, New York, and Wisconsin).

INTERSTATE COMPARISONS

Table 4-4 presents the rankings of each state in selected enrollee characteristics. Although firm conclusions regarding the typical enrollee cannot be made by linking together a state's predominant enrollee characteristics, a portrait of the average enrollee can be made. For example, California has the highest percentage of enrollees classified as disadvantaged (94.4 percent), and most of the characteristics included in the criteria for defining disadvantaged appear to support this ranking. California has the highest percentage of nonwhite and below-poverty-level enrollees. It ranks second in the number of welfare recipients and third in the number of unemployed. On the other hand, California's enrollees exhibit characteristics that would usually imply labor market stability: first in primary wage earners, second in heads of households, third in employed ten years or more, and fourth in the number of married enrollees.

TABLE 4-4

Rankings of Each State in Selected Enrollee Characteristics (By disadvantaged)[a]

State	Disadvantaged	Male	Married	Primary Wage Earner	Head of Household	One to Two Dependents	Nonwhite	Public Assistance	Education under 12 Years	Employment under 10 Years	Below Poverty Level	Under-employed	Unemployed
Alaska	10	10	7	7	3	1	b	1	6	6	9	8	7
California	1	2	4	1	2	5	1	2	4	9	1	10	3
Connecticut	4	9	8	10	8	7	2	3	2	8	11	6	8
Louisiana	7	11	6	11	10	5	4	11	10	1	6	11	2
Minnesota	8	4	5	8	9	9	8	4	11	3	3	2	9
Missouri	11	8	3	3	4	2	b	8	7	7	10	4	5
New York	5	5	9	9	7	10	3	5	3	4	8	3	6
North Dakota	6	1	2	6	11	11	9	10	1	10	5	5	10
Utah	9	3	1	4	1	4	6	9	9	11	7	1	11
Washington	3	7	10	2	6	8	7	7	8	5	2	9	1
Wisconsin	2	6	11	5	5	3	5	6	5	2	4	7	4
Average percent	71.3%	41.8%	31.6%	79.8%	65.0%	34.8%	22.6%	20.4%	35.9%	84.0%	73.2%	21.1%	73.9%
Maximum	94.4%	80.4%	48.6%	95.8%	71.8%	43.3%	56.8%	36.1%	66.4%	89.1%	87.6%	32.0%	82.8%
Minimum	55.7%	13.0%	23.8%	61.9%	52.3%	24.3%	4.7%	7.8%	26.3%	77.1%	52.2%	14.4%	54.9%

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[a] Data collected by Olympus Research Corporation.

[b] Percentage "unknown" exceeds 20 percent.

By way of contrast, Utah's enrollees exhibit consistent nondisadvantaged characteristics. Utah is ninth in the percentage of disadvantaged, eleventh in unemployed, ninth in welfare recipients, ninth in high school dropouts, and sixth in nonwhite enrollees. Unlike California, Utah's labor market stability characteristics are consistent with the low-ranking disadvantaged characteristics: first in the percentage of underemployed, heads of household, and married enrollees, and third in the number of enrollees who have had ten years or more of experience in the labor market.

While each state has a different mix of enrollees (making interstate comparisons difficult), disadvantaged rankings tend to be higher in states with large urban areas--probably because a high proportion of the rural poor are white. A member of a minority group whose income is below the poverty level is automatically classified as disadvantaged; a white person, on the other hand, whose income is below the poverty level, must be either a youth, older worker, handicapped worker, or school dropout before he can be classified as disadvantaged. It may also be that the administrators of urban programs are under more pressure to enroll the disadvantaged than administrators in rural areas.

ENROLLEE CHARACTERISTICS BY TYPE OF TRAINING

Differences in enrollee characteristics by type of training are highly correlated with courses that enroll mainly men and/or those that enroll mainly women. Women are the majority in the following courses:

Course	Percentage
LPN/RN	95.4%
Clerical and sales	88.1%
Other health occupations	86.1%
Cosmetology	78.1%

Men are the majority in the following:

Course	Percentage
Welding	100.0%
Production maching	100.0%
Automotive	100.0%
Nonauto repair	92.2%
Other	79.6%

Table 4-5 lists courses according to the above groupings and breaks down enrollee characteristics for each course. Male courses have higher percentages of married enrollees, heads of households, and whites (except for welding). Fewer enrollees in predominantly male courses are welfare recipients or have been unemployed 30 weeks or more.

Thus, males have more work experience and greater pressures on them to work (heads of households and primary wage earners). Although the female occupations show no greater percentage "out of the labor force," there is evidence to support a weaker attachment to the labor force (less long-term employment experience and more welfare recipients).

TABLE 4-5

Enrollee Characteristics for Male and Female Courses[a]

Characteristic	Clerical/ Sales	Cosme- tology	Health Occu- pations	LPN/ RN	Auto- motive	Welding	Pro- duction Machine	Non- auto Repair	Other
Male	11.9%	21.9%	13.9%	4.6%	99.2%	100.0%	100.0%	100.0%	79.6%
Married	20.3	20.6	20.9	19.7	56.8	48.5	62.5	58.6	46.3
On welfare	24.5	28.9	24.3	23.0	11.2	19.4	5.0	6.9	13.9
Over 12 years of education	70.6	50.7	79.2	79.1	47.2	30.3	52.5	64.7	69.2
Over 10 years of employment	12.9	8.7	10.1	17.2	16.9	20.5	22.5	33.0	20.8
Over $2.50/hour last job	15.6	12.3	19.9	9.2	29.4	45.2	61.1	45.9	37.7
Over 30 weeks current employment	36.7	33.9	28.7	25.7	17.3	26.0	14.8	21.6	20.7
Primary wage earner	76.4	75.8	74.3	83.7	82.0	92.2	75.0	88.8	83.0
Head of household	64.7	60.5	58.9	66.3	68.5	75.3	67.5	73.3	66.5
White	74.0	76.9	73.4	85.7	87.6	67.5	81.6	81.4	83.0
No dependents	42.3	48.2	45.0	41.7	39.7	45.2	37.5	40.5	43.1
Disadvantaged	73.9	77.3	63.9	62.8	75.7	84.1	64.1	62.1	65.2
Below poverty level	77.7	75.4	67.7	69.6	76.1	82.2	64.1	61.9	67.1
Underemployed	16.5	15.4	25.2	38.9	22.6	10.8	20.0	19.1	23.1
Unemployed	77.6%	78.3%	71.3%	58.8%	69.9%	87.3%	75.0%	73.9%	71.9%

[a] Data collected by Olympus Research Corporation.

Within the predominantly male and female occupations there are some differences. For the female occupations, the health group (including LPN/RN) has a higher percentage of underemployed than unemployed and lower percentages of high school dropouts, disadvantaged, and enrollees below the poverty income level.

Of course, welding stands out among the male-dominated occupations as serving a higher proportion of enrollees with disadvantaged characteristics. More welding enrollees are nonwhite, high school dropouts, welfare recipients, unemployed more then 30 weeks, unemployed rather than underemployed, disadvantaged, and below poverty level. Although the welding group has the highest percentages of heads of households and primary wage earners, it ranks relatively low in the married and dependents categories.

IR CHARACTERISTICS COMPARED TO OTHER FORMS OF INSTITUTIONAL TRAINING

The following enrollee characteristics data from three sources are shown in Table 4-6:

- Characteristics of MDTA institutional enrollees during 1971, compiled by OMDS. Includes data for all institutional enrollees, Skills Center enrollees, and IR enrollees (national sample).
- Characteristics of IR enrollees during fiscal years 1969-71, compiled by ORC for 11 of 12 states included in the sample for this evaluation (IR sample).
- Characteristics of enrollees in all institutional programs, except IRs, for 14 cities (many of which are in the same states as those included in this evaluation), compiled by ORC in its evaluation of the effectiveness of

institutional training in meeting employers' needs in skills shortage occupations[2] (skills shortage sample).

The following conclusions can be drawn from Table 4-6:

- While according to national data there are no large differences between IRs and other programs in the percentage of enrollees below poverty level, the IR sample shows a larger percentage in this category than either the national or skills shortage samples.
- In accord with national data, the IR sample shows 4 to 6 percent more heads of households and primary wage earners than other forms of institutional training.
- IRs show fewer enrollees unemployed than do Skills Centers. They also show fewer enrollees in the labor force than skills shortage cities.
- Enrollees in the IR program have more formal education than trainees in other forms of institutional training. The IR program has 10 to 20 percent more high school graduates than other institutional programs. A comparison between the IR and national Skills Center samples show between 20 and 26 percent more high school graduates in the IR program.
- The IR program is predominantly white. According to the IR sample, whites comprised 77.4 percent of the enrollment in fiscal years 1969-71; the national figure for fiscal year 1971 is 71.4 percent. In fiscal year 1971, whites made

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[2] Olympus Research Corporation, "Evaluation of the Effectiveness of Institutional Manpower Training in Meeting Employers' Needs in Skills Shortage Occupations, June 1972.

TABLE 4-6

Enrollee Characteristics Summary Comparison for a Variety of Sample Populations (Fiscal years)[a]

	National Data for 1971			ORC Sample (IRs)		Skills Shortage Sample	
	Total Institutional Enrollees	Total Skills Center	Total IRs	IR/ORC Study 11 States, 1971	IR/ORC Study 11 States 1969-71	14 Skills Shortage Cities/ORC Study 1971	14 Skills Shortage Cities/ORC Study 1969-71
Sample size[b]	131,989	22,839	11,851	1,350	3,818	1,304	5,980
Disadvantaged	66.3%	74.6%	67.6%	67.4%	71.3%	68.7%	62.4%
Poverty status	63.4	71.5	68.4	75.1	73.2	67.5	59.8
Family status:							
Head of household	58.1	56.6	63.6	62.4	65.0	58.8	57.2
Primary wage earner	73.3	74.6	76.1	77.9	79.8	79.9	76.8
Previous gainful employment:							
3-9 years	35.2	33.2	36.1	34.5	35.9	35.8	36.2
10 years or more	18.7	16.3	17.1	16.4	16.0	15.6	16.2
Employment status prior to enrollment:							
Underemployed	13.5	9.5	19.5	22.3	21.1	13.3	13.3
Unemployed	72.7	85.9	73.1	72.5	73.9	74.4	74.3
15-26 weeks	12.7	16.2	13.7	NA	NA	NA	NA
20-29 weeks	NA	NA	NA	12.7	12.6	12.1	11.4
27 weeks or more	23.8	27.0	24.0	NA	NA	NA	NA
30 weeks or more	NA	NA	NA	28.0	28.5	36.3	26.3
Hourly wage of last job:							
Under $1.50/hr	NA	NA	NA	20.0	18.7	11.6	18.3
$2.50/hr & over	NA	NA	NA	25.6	23.3	29.4	24.1
Education--years of school:							
8 years or less	12.4	12.4	5.8	4.1	5.7	9.2	10.9
9-11 years	36.2	44.1	26.7	26.2	30.2	43.0	45.5
12 years or more	51.4	43.5	67.5	69.7	64.1	47.8	43.5
(Average years)	(NA)	(NA)	(NA)	(11.5 yrs)	(11.3 yrs)	(10.9 yrs)	(10.7 yrs)
Race and ethnic data:							
White	55.6	44.7	71.4	83.6	77.4	52.1	41.0
Negro	39.3	51.9	24.3	11.8	17.7	44.1	55.5
Spanish surname	12.8	13.5	7.8	6.4	6.8	12.2	7.4
Other minorities	5.1%	3.4%	4.3%	4.6%	4.9%	3.9%	3.4%

NA = not available

[a] Data collected by Olympus Research Corporation.

[b] This number = 100%.

TABLE 4-6 (cont.)

	National Data for 1971			ORC Sample (IRs)		Skills Shortage Sample	
	Total Institutional Enrollees	Total Skills Center	Total IRs	IR/ORC Study 11 States, 1971	IR/ORC Study 11 States 1969-71	14 Skills Shortage Cities/ORC Study 1971	14 Skills Shortage Cities/ORC Study 1969-71
Age:							
Under 19 years	13.8%	15.4%	14.2%	NA	NA	NA	NA
10-21 years	26.1	28.7	25.0	NA	NA	NA	NA
22-34 years	40.2	38.1	40.7	NA	NA	NA	NA
35-44 years	11.4	10.4	12.4	NA	NA	NA	NA
45 and older	8.5	7.4	7.7	NA	NA	NA	NA
(Average)	(NA)	(NA)	(NA)	(27.8 yrs)	(28.6 yrs)	(26.8 yrs)	(28.0 yrs)
(Standard deviation)	(NA)	(NA)	(NA)	(9.62 yrs)	(9.72 yrs)	(8.85 yrs)	(9.14 yrs)
Public assistance:							
Total yes	15.8	18.3	18.0	15.2%	20.4%	17.5%	15.8%
Male yes	NA	NA	NA	3.2	4.4	6.7	5.5
Female yes	NA	NA	NA	12.0	16.0	10.7	10.3
Handicapped	11.1	11.1	14.9	NA	NA	NA	NA
Veterans	23.1	20.1	18.5	NA	NA	NA	NA
Sex:							
Male	58.5	60.0	46.9	45.3	41.8	58.8	53.1
Female	41.5%	40.0%	53.1%	54.7	58.2	41.2	46.9
Marital status:							
Married	NA	NA	NA	33.7	31.6	32.6	32.0
Not married	NA	NA	NA	66.3	68.4	67.4	68.0
Number of dependents:							
No dependents:	NA	NA	NA	45.4	43.4	51.6	51.7
1-2 dependents	NA	NA	NA	34.1	34.8	26.6	27.6
3-5 dependents	NA	NA	NA	16.7	18.3	18.2	17.5
6 or more dependents	NA	NA	NA	3.8%	3.6%	3.6%	3.3%

NA = not available

up only 44.7 percent of Skills Center enrollees and 52.1 percent of enrollees included in the skills shortage sample.

- The IR program is predominantly female. Slightly more than 58 percent of the enrollees in the IR sample are women, as compared to 40 percent for the national Skills Center sample and about 47 percent of the skills shortage sample. Nationally in 1971, women made up slightly more than 53 percent of all IRs; the corresponding figure for all institutional training is 41.5 percent.

To sum up, IR enrollees appear to be less disadvantaged than enrollees in other types of institutional training. This is true despite the fact that, with the exception of the Skills Center sample, there are no significant differences between the number of IR enrollees checked as disadvantaged (on the MA-101s) and those in other programs. An examination of characteristics that indicate the state of "being disadvantaged" shows that more IR enrollees are white, high school graduates, and underemployed rather than unemployed. In addition, more IR enrollees are heads of households and primary wage earners than enrollees in other types of institutional training.

One other extremely important point should be kept in mind when comparing IRs with enrollees in other types of institutional training. Slightly less than one-half of all IR trainees are from small urban or rural areas; whereas 86 percent of all Skills Center enrollees are from large metropolitan areas. The life experiences of rural trainees, although not measurable, are bound to be different from those who have matriculated from urban ghettos. These life experiences may have a marked effect on an enrollee's attitude toward training, his personal motivation, and his commitment to the work ethic. The combination of measurable and immeasurable differences between IR and Skills Center enrollees leads to the conclusion that the two programs are dealing with different types of people. It is important to keep these differences in mind, particularly when comparing performance and cost data (Chapter Six) for the two programs.

ANALYSIS OF ORC ENROLLEE INTERVIEWS

Table 4-7 gives information obtained from 244 enrollee interviews in the field. No attempt was made to interview a random sample of IR enrollees; rather, the purpose was to achieve as wide an occupational representation as possible. Consequently, the characteristics summarized in this section do not necessarily match those derived from MA-101s.

The typical enrollee interviewed by ORC has the following characteristics:

- He (55 percent male) is most likely to be married (42 percent), or divorced (18 percent), with dependents (60 percent). He has either lived in the general area of the school all his life (54 percent) or longer than five years (22 percent).
- He has completed high school (60 percent) or gone beyond (13 percent). He is part of a majority of IR enrollees (60 percent) who have had little or no meaningful skilled employment experience.
- He and most of his fellow IR enrollees were introduced to the program by ES (52 percent) and were given aptitude tests by ES (70 percent) before being referred to training.

TABLE 4-7

Results of a Sample of MDTA IR Enrollees Interviewed by ORC in Twelve States[a]

	Private School Enrollees			Public School Enrollees			Combined Enrollees		
	Percentage	Number	Rank	Percentage	Number	Rank	Percentage	Number	Rank
Enrollees		94			150			244	
Different occupations		30			54			61	
Characteristics:									
Sex:									
Percentage male	54.0%			55.0%			54.7%		
Percentage female	46.0			45.0			45.3		
Marital Status:									
Respondents		92			139			231	
Percentage single	38.0			41.0			39.8		
Percentage married	40.0			43.0			42.0		
Percentage divorced or separated	22.0			16.0			18.2		
Dependents:									
Respondents		91			133			224	
Percentage of respondents with dependents	65.9			55.6			59.8		
Avg no. of dependents for respondents with dependents	2.3			2.4			2.3		
Avg no. of dependents for all respondents	1.5			1.3			1.4		
Residences:									
Respondents		87			130			217	
Percentage in area 5 years or less	36.0			17.0			18.0		
Percentage in area longer than 5 years but less than lifetime	22.0			22.0			21.7		
Percentage in area for most or all of lifetime	43.0			62.0			53.9		
Education:									
Grade-level attainments									
Respondents		93			133			226	
Percentage 9th grade or below	7.5			9.0			8.4		
Percentage 10th-12th but not high school graduate plus GED's	20.4			17.0			18.1		
Percentage high school graduates only	58.0			62.0			60.2		
Percentage with education above high school level	14.0%			13.0%			13.3%		

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[a] Data collected by Olympus Research Corporation.

TABLE 4-7 (cont.)

	Private School Enrollees			Public School Enrollees			Combined Enrollees		
	Percentage	Number	Rank	Percentage	Number	Rank	Percentage	Number	Rank
Work Experience:									
Respondents		94			121			215	
Percentage in relatively skilled jobs with one or more years of experience	20.2%			33.1%			27.4%		
Percentage with minimal or part-time experience only	54.0			49.6			51.6		
Percentage with relatively skilled military exp experience	16.0			9.1			12.1		
Percentage with no work experience	9.6			8.3			8.8		
Referral and selection:									
Who initially interested you in MDTA training?									
Respondents		98			146			244	
Percentage employment service	59.0			48.0			52.5		
Percentage a school or school counselor	8.0			11.0			9.8		
Percentage a friend or relative	13.0			23.0			19.3		
Percentage other (another agency, program, etc.)	13.0			18.0			16.0		
Testing of any kind:									
Respondents		82			103			185	
Percentage Employment Service only	74.0			47.0			58.9		
Percentage school only	1.0			8.0			4.0		
Percentage both	11.0			11.0			11.0		
Percentage neither	13.0			35.0			25.4		
Time elapse from first ES visit to enrollment									
Respondents		86			100			186	
Avg time in weeks	5.3			10.9			8.3		
Percentage over 26 weeks	14.0			2.0			12.9		
Percentage over 13 weeks	9.3%			4.0%			6.5%		

TABLE 4-7 (cont.)

	Private School Enrollees			Public School Enrollees			Combined Enrollees		
	Percentage	Number	Rank	Percentage	Number	Rank	Percentage	Number	Rank
In occupation of preference:									
Respondents		88			129			217	
Percentage yes	87.0%			91.0%			89.9%		
Percentage no	12.0			9.0			10.1		
In school of preference:									
Respondents		76			124			200	
Percentage yes	85.0			82.0			83.5		
Percentage no	14.0			18.0			15.5		
Scheduled length of course:									
Respondents		91			112			203	
Avg length in months	9.9			12.9			11.5		
Percentage over 12 months	5.5			25.9			16.7		
Percentage over 6 months	9.9			8.0			7.9		
Problems and concerns cited:									
Total citings		88			130			218	
Enrollee's age	3.4		6	1.5		8	2.3		7
Counseling	-		-	1.5		8	.9		8
Childcare	11.4		4	7.7		6	9.2		5
Housing	6.8		5	1.5		8	3.7		6
Family	13.6		3	9.2		4	11.0		3
Financial	14.8		2	20.8		3	18.3		2
At Attendance	-		-	-		-	-		-
Progress in course	21.6		1	23.8		1	22.9		1
Quality of instruction	11.4		4	23.1		2	18.3		2
Transportation	13.6		3	8.5		5	10.6		4
Placement potential	2.3%		7	2.3%		7	2.3%		7

TABLE 4-7 (cont.)

	Private School Enrollees			Public School Enrollees			Combined Enrollees		
	Percentage	Number	Rank	Percentage	Number	Rank	Percentage	Number	Rank
Other support and program participation									
Other training-related support currently being received:									
Respondents		90			121			211	
Percentage none	66.0%			65.3%			65.9%		
Percentage Veterans Administration	13.0			18.2			16.1		
Percentage ADC	16.0			8.3			11.4		
Percentage other	4.0			8.3			6.6		
Other programs participated in the past:									
Respondents		82			121			203	
Percentage none	79.0			86.6			83.7		
Percentage MDTA	6.0			4.1			4.9		
Percentage WIN	5.0			2.5			3.4		
Percentage NYC	-			1.7			1.0		
Percentage other	10.0			5.0			6.9		
Employment expectations upon completion of course:									
Respondents		89			137			226	
Percentage positive	81.0			81.0			81.0		
Percentage negative	19.0			19.0			19.0		
General attitude toward and perception of IR program:									
Respondents		88			134			222	
Percentage favorable	84.0			85.1			84.7		
Percentage unfavorable	16.0%			14.9%			15.3%		

- He waited slightly more than eight weeks from the time of his first contact with ES to the time he was actually enrolled in a training program (90 percent) at the school of his choice (84 percent). His planned length of training is 11.5 months.
- He and his fellow enrollees cite the following problems and concerns:
    - -- Progress in course (22 percent): Concern expressed by enrollees that they were not able to complete all work assignments, or that they were unable to keep up with their fellow enrollees
    - -- Quality of instruction (18.3 percent): Complaints that the instruction was poor, the facilities and equipment inadequate, or enrollees did not receive adequate personal attention
    - -- Financial (18.3 percent): Inability to pay the bills, usually rent or mortgage, medical and time payments for cars, TV sets, etc.
    - -- Family (11 percent): Problems caused by sickness to family members, marital disagreements, children in trouble, etc.
    - -- Transportation (10.6 percent): Difficulties in obtaining transportation to and from home and school
    - -- Child care (9.2 percent): Problems cited by women enrollees in finding baby sitters for their children while they attend classes
- He receives no other agency support while he is in training (66 percent), although some of his fellow trainees receive GI assistance (16 percent) or welfare (11 percent).

- He is not a program "hustler" in that he has never previously been in a federal manpower program (84 percent).
- He generally looks upon his MDTA experience with favor (86 percent), and his personal expectation for future employment is positive (81 percent).

If this "typical IR trainee" enrolled in a private rather than a public school, he would find that his fellow private school trainees had about the same personal characteristics as those enrolled in public schools. He would have noted some differences, however, in his MDTA experience:

- The chances are greater that ES would have introduced him to the program (59 percent private vs. 48 percent public), and that he would have been given an aptitude test (85 percent private vs. 58 percent public).
- He would have been enrolled in the program in half the time (5.3 weeks vs. 10.9 weeks) for a shorter period (9.9 months vs. 12.9 months).

DESCRIPTION OF ONE STATE'S IR TRAINEES

The preceding profile is based on the characteristics of enrollees in all 12 states. Because of the flexible nature of the IR program, however, that which is typical of the whole may not be typical of any particular state. To emphasize this point, a description of enrollees interviewed in one Midwestern state follows.

Interviews in One Midwestern State

The total number of students interviewed in one Midwestern state was 54; the total types of occupations represented, 28. There were 46 students from the state's vocational technical schools and eight from private schools. The number of students in selected occupations are as follows:

Number of Students	Occupations
5	Accounting
5	Machine shop
4	Auto mechanic
4	Broadcasting
4	Carpentry
3	Electrician
3	Optical technician
3	Welding
2	Drafting
2	Electronic data processing
2	Food preparation/chef management
2	General secretary
2	Tool design
1	Auto body
1	Business administration
1	Cosmetology
1	Diesel mechanic
1	Furrier
1	General office business
1	Industrial instrumentation
1	Legal secretary
1	LPN
1	Medical lab assistant
1	Medical secretary
1	Small engine repair
1	Soil conservation
1	Stenography
1	Wastewater treatment

The average length of scheduled training was 12.7 months. Other statistics which evolved from the survey were:

Subject	Percentage
Characteristics:	
Sex:	
Male	76
Female	24

Subject	Percentage
Age (average, 23.4 years):	
Under 21	17
21-44	32
45 and over	5
Marital status:	
Single	53
Married	45
Dependents:	
With dependents (average number of dependents, 2)	50
Lifetime resident in general school area	94
Educational attainment:	
Below high school level	13
High school graduate only	67
Above high school level	20
Work experience	
One or more years of meaninful experience	36
Part-time or menial only	25
Meaningful military experience	14
No experience	4

Previous work experience was (1) babysitting, waitress, shipping/receiving, rod and chainman, hostess, sweater factory; (2) military service trades, farmer, truck driver, production machine operator, forklift operator; (3) teacher, welder and machinist, tool and die, quality control in arms manufacturing, mortician.

The recruitment, selection, and referral of those surveyed were as follows:

How introduced to MDTA:	
By ES	30%
By schools	11%
By friend or relative	30%
By other	28%

Tested in any way by ES; avg. time from first ES interview to enrollment (17 weeks)	
Enrolled in occupation of choice	96%
Enrolled in school of choice	87%
Have positive employment outlook	64%
Favorably impressed with MDTA experience	70%

Finally, OIC received data on other support and previous programs as follows:

Currently receiving other program support:

None	73%
GI assistance	18%
ADC aid	0%
Other assistance	9%

Programs previously participated in:

None	87%
MDTA	9%
WIN	0%
NYC	2%
Other	0%

Case Histories

A 24-year-old drifter from New Jersey, who is on the MDTA program and receiving VA assistance (and according to the assistant school director, getting unemployment compensation) and who works three nights a week, complained that MDTA promised to provide him with necessary equipment for a welding course. His gloves and goggles wore out and MDTA would not replace them.

A 48-year-old former teacher found himself out of a job as a quality control specialist in arms manufacturing. His U.S. senator offered to help those out of work due to military cutback He is now studying to be a radio announcer.

Two high school dropouts were in a machine shop program at the Skills Center. Their counselor referred them to the industrial technical institute where they are now enrolled in an extremely challenging machine shop program. Both have refused job offers in order to complete the entire course.

A 31-year-old father of four lost his job in a plant shutdown and is receiving $76 a week in allowances, compared to the $61 a week the single trainee described in our first case history is receiving for MDTA alone.

Another father of four, who is 24 years old and a veteran, took a 12-week course in retail sales. He is now taking a course in business administration. Eventually, he wants to be a psychologist. Meanwhile he is obtaining all the training and experience he can get dealing directly with people. He thinks business administration is useful for any future field. He checked ES for programs available that would give him a socially oriented occupation. His most pressing concern at the present time is supporting his wife and children. He receives a VA check occasionally.

A 53-year-old farmer with two children at home developed a heart condition. The vocational rehabilitation people referred him to ES/MDTA which put him into a program with a large number of retarded enrollees. ES/MDTA suggested that he study accounting, on the basis of his aptitude test results, but he wanted to remain in his own home town, which already has a number of CPAs, etc. The farmer wanted something consistent with his background--as a farmer, he was always adept at repairing machinery. The heart condition ruled out large machinery, but his physicial allowed him to go into small engine repair, provided he take it easy and not worry about employment. He is highly motivated to get off Social Security and become independent again.

A 25-year-old father of one took a two-year machine tool-and-die course under MDTA four years ago. He developed a hearing problem, however, and was forced to abandon "noisy shops." He is now studying tool design under MDTA. He finds his present school a great improvement over his last MDTA experience.

These case histories are typical of trainees enrolled in the IR program in all 12 states. Only the first might be found among typical case histories in the Skills Center program. They support ORC's contention that the IR program is serving a different type of enrollee from the class-size program, especially the Skills Center program. It would appear to follow, therefore, that the IR program itself would be different from most class-size institutional projects. Chapter Five tests this hypothesis.

Chapter Five

The Individual Referral Program

ORC's evaluation of the IR program is based on visits to 92 training institutions in the 12 sample states. In selecting schools for the on-site evaluation, ORC concentrated on the following:

(1) Evaluating schools which receive a relatively large share of IRs and which reflect the demographic and geographic distribution of slots

(2) Achieving a representative balance between private and public schools

(3) Examining as wide a range of occupational offerings as possible

The schools selected were reviewed with, and all appointments arranged through, state departments of vocational education. ORC staff received outstanding cooperation in scheduling visits within extremely brief time limits. The teams' reception at the schools was smooth and open, reflecting well-established relationships between state agencies and those on the "firing lines." As a result, ORC was able to visit approximately twice the number of training institutions called for in the contract.

The number of trainees enrolled in the schools that were visited totaled 1,797 (1,224 in public and 573 in private schools). ORC's general approach was to obtain an overview of the program through preliminary discussions with school officials and then tour the facilities to observe the program in operation. Following the tour, the two team members separated, one examining school administrative practices, procedures, and general philosophy; the other observing classroom operations and interviewing instructors, counselors, and enrollees.

The major thrust of ORC's on-site evaluation was to determine whether the type of training offered IR enrollees differs substantially from that offered enrollees in class-size projects, especially Skills Centers and other multi's. One of the major reasons for passage of the MDTA was to provide greater flexibility in preparing the adult unemployed for productive employment in their home communities. It was charged that traditional vocational education was not geared for meeting the needs of the adult unemployed and was restricted to occupational offerings that were either fast becoming obsolete or more avocational than vocational in nature. In addition, when MDTA shifted its emphasis toward the disadvantaged, it was believed that neither profit-making private nor record-conscious public schools would be willing to accept a clientele which had either "been pushed out" or had dropped out of the public schools, or that even if they were willing to accept such a clientele, school programs were not designed to meet the special needs of the disadvantaged.

During the ten-year period since the passage of MDTA, there has been much improvement in the nation's vocational education system. New facilities have been built, old facilities have been improved, and the range of occupational offerings has been widened considerably. Community colleges, as opposed to the more academically oriented junior colleges, have been established in many areas of many states. Private schools, designed specifically to prepare students for some of the newer as well as the older occupations, have been established in many urban and some rural areas throughout the country. The question therefore arises as to whether special schools specifically designed to meet the needs of MDTA clients (such as Skills Centers) are still necessary.

With respect to the adequacy of facilities and equipment and the range of occupational offerings, there can be no doubt that there has been a great deal of improvement in vocational education. The question remains, however, of whether this system is designed to serve MDTA's clientele, especially the educationally deprived and those who have motivational and/or attitudinal problems. Are community colleges and vocational schools (both private and public) geared to serve entire communities, including those who suffer severe social and cultural deprivation, or are they designed solely for the "qualified," those who can adapt themselves easily to traditional school operations, and are highly motivated and committed to the work ethic?

Skills Centers, multi's, and many individual class-size projects are designed to provide special services, in addition to occupational training, to the disadvantaged. They feature open-entry/open-exit, basic education, prevocational training, supportive services, intensive personal counseling, and individualized instruction. To the extent that existing institutions could provide such services, the need for these specialized programs would be reduced. The on-site evaluation phase of this report therefore attempts to determine the extent to which IR institutions are geared toward serving the total MDTA clientele.

GENERAL INFORMATION

This section documents the types of schools visited by ORC, their IR enrollments, school administrators' views and opinions about IR trainees, how IRs are assigned to classes, and entrance requirements.

Types of Schools

ORC visited a total of 46 public and 46 private schools. The breakdown is as follows:

Public	Number
Vocational technical schools (2 year)	27
Community and junior colleges (2 year)	11
College/university (4 year)	2
High schools	3
Skills Centers	2
Prevocational Center	1
Private	
Business Colleges	17
Trade/technical schools	11
Beauty schools	5
Electronics schools	5
Medical/dental assistants schools	2

Private	Number
Truck driver schools	2
Nursing schools	2
Laboratory technician schools	1
Language schools	1

IR Enrollment

The size of the schools visited varied from seven students to more than 8,000; the number of IRs enrolled ranged from one to 87. Although ORC made a special effort to visit schools with the highest concentration of IRs, 75 percent of the public schools had 25 or fewer, and 35 percent had 10 or fewer. Of the private schools, 87 percent had 25 or fewer, and 40 percent had 10 or fewer. Table 5-1 presents a breakdown of this information.

Administrator Views of IR Enrollees

Administrators were asked to compare IRs with their regular students. The purpose was twofold: (1) to determine whether school administrators believe that IR enrollees are superior, inferior, or about the same as regular students, and (2) to determine whether either IRs or regular students receive any kind of special treatment. Comparisons were asked concerning attainment, ability, degree of disadvantage, ethnicity, and age.

Educational Attainment

Of all administrators, 85 percent interviewed reported that most of their students, including IRs, are either high school graduates or have attained GEDs

(92 percent of the public and 75 percent of the private schools); 62 percent believed that IRs have the same educational attainment as regular students; 38 percent reported lower attainment levels. None thought that IRs have higher attainment levels than regular students.

Of those who reported lower attainment levels, the most prevalent observation was that IRs have problems in computational and communications skills (mainly because they have been away from school longer than regular students). Although

TABLE 5-1

Frequency of IR Enrollment by Public and Private Schools[a]

Number of IRs	Public		Private		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
1-5	3	7%	14	33%	17	19%
6-10	7	15	7	17	14	16
11-15	8	17	8	19	16	18
16-20	5	11	6	14	11	12
21-25	5	11	2	4	8	8
26-30	3	7	2	4	6	7
31-50	8	17	2	4	10	11
More than 51	7	15%	1	2%	8	9%
TOTAL	46		43[b]		89	

[a] Data collected by Olympus Research Corporation.

[b] Three private schools had no IRs enrolled at the time of the Olympus Research Corporation visits.

some administrators said that IRs need more time to complete their courses, the vast majority reported no significant differences in educational attainment between IRs and regular students.

Ability

Most administrators (80 percent) reported that the ability of IRs is about the same as that of their regular students. Several noted that IRs are frequently slower in getting started because of reading and arithmetic problems, but their ability to accomplish their training objectives is equal to that of other students. Only 14 percent believed that the ability of IRs is lower, and 8 percent reported that IRs have higher ability than regular students.

Degree of Disadvantaged

Generally speaking, the administrators interviewed equated "disadvantaged" with financial problems, although some also mentioned social and cultural deprivation. With this in mind, the vast majority of administrators (80 percent) reported that IRs are more disadvantaged than regular students, although a large percentage (18) reported that their regular students also have severe financial problems.

Poor attendance is often an indication of the degree of disadvantaged. Most administrators reported a 90 percent attendance rate; only 6 percent reported 80 percent or less. Even more significant, 60 percent said that the attendance rates of IRs are the same as those of regular students, and 25 percent reported that IR attendance rates are higher. Two reasons were given for the latter phenomenon: (1) the allowance factor and (2) greater sense of purpose and motivation on the part of IRs.

Ethnicity

Sixty percent of the schools indicated that they are enrolling minority IRs in roughly the same proportion as the percentage of minorities in their regular student bodies. However, a substantial number (approximately 50 percent) enroll 5 percent or fewer minorities. This is partly due to the geographical location of many of the schools (rural--Minnesota, Wisconsin, North Dakota, Missouri, and Utah). Twenty-five schools indicated that the percentage of IR minorities is greater than that of their regular student bodies, whereas 14 schools said that the percentage of IR minorities is lower.

Age

Nearly 50 percent of the administrators reported that IRs are generally older than regular students, 37 percent said there are no age differences, and 14 percent said that IRs are younger. Private schools report more older IRs (50 percent) than do public schools (35 percent). Nearly 50 percent of the public schools reported that IRs are the same age as their regular students.

Generally speaking, administrators do not look upon IRs as "different" from their regular students. For the most part, according to school administrators, they have the same educational attainment, the same ability, and are of the same ethnic origins as their regular students. Most administrators believe that IRs are more disadvantaged and older than their regular students, but "disadvantaged" means in most cases "unemployed," or having financial problems (not motivational, attitudinal, and other problems associated with social and cultural deprivation). Some administrators believe that IRs should have a longer period of training, mainly because of a lack of computational and communications skills, but the majority of administrators interviewed do not share this opinion.

Class Assignment

Of the 92 schools visited, 87 assign IRs to regular ongoing classes. Of the remaining five, three are programs designed specifically for the disadvantaged (two are Skills Centers and one is a Prevocational Center), and one is an OJT program which has no relationship to the institution by which it is sponsored (a state university). Only one school, a junior college, assigns IRs (and other public agency referrals) to separate classes. This course is given during off hours by instructors who are not part of the regular junior college faculty.

Entrance Requirements

Most schools indicate that the same entrance requirements apply to IRs as apply to regular students. The two Skills Centers, of course, have no entrance requirements, and the junior college mentioned above conducts special classes for IRs, but these classes are not considered part of the school's regular curriculum. One school, the Prevocational Center, has reverse requirements: enrollees above the 9th grade level are screened out. One vocational school leaves entrance requirements to individual course instructors who are allowed to accept or reject students according to their own criteria.

The remainder, a total of 87, indicate that they have specific entrance requirements. Fourteen schools, however, lower their requirements on the recommendation of ES counselors. Seven schools give priority to IRs over applicants on waiting lists (but do not lower entrance requirements). Many schools made a point of saying that local ES offices are thoroughly acquainted with their entrance requirements and do not refer applicants who cannot meet their standards. ORC was told that this was accomplished "only after some head knocking with ES officials."

The entrance requirements and criteria reported by the private schools were generally more specific and frequently higher than those of public schools. Of the private schools, 29 (more than 50 percent) indicated that a high school diploma (or GED) was required or preferred for acceptance into the institution. By way of contrast, only 12 (or 26 percent) of the public schools indicated that a high school diploma was a basic requirement for acceptance into the school. Fourteen public schools (in addition to six special IR institutions or classes) reported no entrance requirements.

PROGRAM ELEMENTS

Four subjects are covered in this section: the curriculum, the special components, the daily schedules, and the length of training. The nature of the IR program, which involves thousands of schools in rural and urban areas (serving from one to 100 enrollees) makes it extremely difficult to perform national or even state evaluations of the IR program.

In every instance, each institution to which IRs are referred could be the subject of an intensive evaluation. This survey therefore is limited to an analysis of certain program elements that can be compared to those existing in other types of institutional training.

Curriculum

In the vast majority of the schools visited, and for most occupational offerings, curricula are realistically attuned to industry needs, well organized, well presented, and carried out in good to excellent facilities, with fair to excellent equipment. The manner of presentation, however, is traditional in nature, featuring a locked-step rather than individualized approach. This is true not only of public schools but of private schools as well. The discussion that follows on special components supports this contention. Nevertheless, ORC rated the curricula in only two schools (public) as "poor"; one of these has no curriculum, as it is essentially an OJT program; the approach to curricula in the second is haphazard and disorganized in all but a few courses. The curricula in 28 percent of the schools were rated "excellent", 41 percent "very good," and 42 percent "fair to good." These ratings apply to both public and private schools in about equal proportion.

Special Components

ORC attempted to determine whether special components, approaches, and techniques which appear to be successful in training the disadvantaged are being employed in the institutions to which IRs are referred. These include: orientation, prevocational training, employability training, basic education and GED, English as a second language (ESL), related theory, the cluster approach, spinoffs, open-entry/open-exit, and individual instruction.

Orientation

Slightly fewer than one-half of the schools visited provide orientation to new enrollees. Only five of the remaining schools, excluding the two Skills Centers and the Prevocational Center, have orientation programs which run in excess of one day. Two of these are private schools. One of the three public schools has a special group orientation program for IRs and other agency referrals.

Prevocational Training

Only 14 of the 92 schools provide prevocational training. Three of these are Skills Centers and one is a Prevocational Center. Of the remaining 10, only one has a formal work-sampling program. The remainder are merely one- or two-week vocational guidance programs, featuring some course sampling but not work sampling.

Employability Training

"World of work" training, including practice in filling out job applications, participating in interviews, grooming and personal appearance, etc., is carried out in 86 percent of the schools (93 percent for private and 80 for public schools). Private business schools generally provide specialized, personal grooming courses; this type of program is given daily or weekly throughout the course (four to eight hours per week). Approximately seven schools provide special employability programs conducted by ES job developers immediately before the student graduates. Most "world of work" instruction is integrated with the daily curriculum. The number of hours devoted to this kind of instruction is left to the discretion of individual instructors. Courses conducted by ES job developers range from eight to 40 hours per course.

Basic Education and GED

Basic education (mostly nonremedial) is included in the curricula of 60 percent of the courses reviewed by ORC. However, only 35 percent of the private schools provide basic education (none remedial), compared to 83 percent of the public schools. The same pattern is true of GED training: Only two private schools provide GED preparation, whereas 22 of the public schools conduct GED programs. The lack of GED training is partially due to the high number of high school graduates participating in the IR program.

English as a Second Language

The majority of the schools (88 percent) do not conduct ESL programs. However, it is not required in most of the geographic areas included in the sample. Nine public and three private schools conduct ESL programs: two in Washington, two in Utah, one in Alaska, one in Wisconsin, and six in California.

Related Theory

Theory is handled in the traditional manner in most of the schools visited. Before shopwork begins, enrollees receive instruction in related theory, sometimes in a laboratory setting, but seldom in a shop setting. Only one of the 92 schools (private) integrates theory with shopwork or uses the "hands-on" approach first, theory second.

The Cluster Approach

The term "cluster" is defined as "a group of occupations sharing a common core of experience and knowledge with provision for horizontal and vertical mobility." This approach is used in only 17 percent of the schools visited--11 public schools, of which four are in one state (Tennessee); three Skills Centers; one special class for IRs; and four private schools. An additional 20 schools are attempting to develop the cluster approach in selected occupations, especially office occupations.

Spinoffs

Spinoffs involve the establishment of training objectives within a single occupational area. Having completed one or more training objectives, the enrollee can either "spin off" or go on to a higher objective. Only 33 percent of the schools, most of which are public schools, use this approach. The new technical institutes include a completion category, "job out"; this includes students who accept jobs before completing their courses. These students are listed as "completers" rather than "dropouts." The category does not necessarily indicate the existence of a legitimate "spinoff" approach, but it may account for the reason that many public schools claim they use this approach.

Open-Entry/Open-Exit

USOE guidelines define open-entry/open-exit as training so planned that:

(1) ES may refer individuals to an occupational cluster at any time, rather than waiting for the start of a new class.

(2) The curriculum and instruction will permit such referral through individualized instruction.

(3) Placement will occur whenever the "employability team" determines that the individual has reached his potential within the cluster.

Only 16 public and 17 private schools are open ended in the true sense of that term; i.e., trainees can be enrolled at any time during the school year and terminated whenever they have become "job ready." It should be mentioned, however, that 11 of the open-ended public schools are in two states, Tennessee and Louisiana. If the three Skills Centers and the Prevocational Center are deducted from the total of 16 open-ended public schools, only two schools outside the states of Tennessee and Louisiana could be considered as open ended.

Individualized Instruction

Individualized instruction provides for each trainee to start his training at the level where it is determined that he needs improvement. His training and experience are taken into account, and as a result, it is not necessary for him to start at some pre-specified, arbitrary level and repeat ground he has already covered. He is then permitted to proceed at his own individual pace along the path to his training objective. Approximately 36 percent of the schools visited, most of which employ the open-ended technique, either are formulating or have formulated individualized instruction programs. Only a few schools, however, have what could be termed legitimate individualized instruction programs, using both advanced software and hardware materials. The majority of these are in the states of Tennessee and Louisiana. Only two schools (both public) outside these states have developed comprehensive individualized instruction programs.

Daily Schedules

One of the most abrasive conflicts between school and MDTA administrators is in the area of daily class schedules. MDTA requires that enrollees receive eight hours per day of training, whereas the average regular training period for IR schools is about 6.3 hours. School administrators and instructors believe that this is an unnecessary regulation. Most, but not all, of the schools operating on daily schedules consisting of six hours or less attempt to "accommodate MDTA regulations" by requiring IR enrollees to attend one- to two-hour special "laboratory sessions" or "study." This causes considerable resentment on the part of IRs, not only because of the extra hours they spend in school, but also because it exposes them as "special students" to the remainder of the student body.

The average hourly schedules for the 92 schools visited are as follows: all schools, 6.26 hours; public schools, 6.40 hours; private schools, 6.10 hours. Table 5-2 shows the frequency with which various hourly schedules occur in public and private schools.

TABLE 5-2

Hourly Schedules in Public and Private Schools[a]

Distribution in Hours	Public		Private		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
4	1	2%	2	4%	3	3%
5	2	4	13	28	15	16
6	29	64	17	37	46	51
7	4	9	7	15	19	21
8	9	20%	7	15%	24	26%

[a] Data collected by Olympus Research Corporation.

Length of Training

Table 5-3 shows the frequency with which courses of varying length occur in public and private schools. The average length of all courses in the 92 schools visited is 47 weeks--56 weeks for public and 47 for private schools. Both are considerably longer than the average length of class-size training (29 weeks).

The figures contained in Table 5-3 include those courses which are available for IRs only. ORC found that in the private schools, the length of courses that are available to IRs is approximately the same as it is for all courses offered by the schools; in the public schools, however, most of the courses last for one year or longer, with the majority of the students enrolled in the two-year-class category.

TABLE 5-3

Length of Training in Public and Private Schools[a]

Distribution in Weeks	Public		Private		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
16 or less	0	0%	4	9%	4	5%
17 to 35	3	8	11	25	14	17
36	3	8	0	-	3	4
37 to 51	5	13	17	39	22	27
52	15	38	10	23	25	30
53 to 77	5	13	2	5%	7	8
78	5	13	0	-	5	6
79 to 103	1	3	0	-	1	1
104	2	5%	0	-	2	2%
TOTAL	39		44		83	
(Average)	(56)		(39)		(47)	

[a] Data collected by Olympus Research Corporation.

ADMINISTRATION

ORC's survey of the administration of IR schools is based primarily on interviews with school principals and/or directors. Within the time limits available to the research teams, it would have been impossible to collect and examine staff and other personnel records for 92 schools, or even 48 schools, if the sample had been maintained at the level called for in the contract. Nevertheless, an attempt was made to compare some administrative factors with those found in Skills Centers. This section therefore reports on responses to questions concerning staff ratios, experience, salaries, certification and training and the ratio of nonwhite to total staff. Comments on facilities and equipment are based on on-site observations.

Staff Ratios

Administrators report that the ratio of staff to enrollees is approximately 13:1, with no significant distinctions between private and public institutions. This contrasts with a 5:1 ratio in Skills Centers. Contact staff (those who deal directly with enrollees) is approximately 60 percent of total staff in both private and public schools.

Service and Experience

The average staff member in both public and private schools has had slightly more than 13 years of experience in his field of work and has been with his present employer for approximately six years. The corresponding figures for Skills Center staff are 14 (years of experience) and three (years with present employer).

Staff Salaries

The average income for instructors in public schools is between $9,500 and $10,500 per year; instructors in private schools earn an average of $8,400 per year. Moreover, most private school instructors work a full year, while the majority of public school instructors work only 10 months. Fringe benefits for public school instructors are far superior to those received by instructors in private schools. Instructors in Skills Centers earn an average of $13,000 a year, but they too must work a full 12 months, and in most cases, their fringe benefits are inferior to those given instructors in more permanent public institutions.

Staff Certification

Instructors in public schools are certified, credentialed teachers. Approximately 35 percent of the teaching staff have had substantial work experience in the trades they teach. This contrasts with Skills Centers, where more than one-half of the instructors are not certified, credentialed teachers but have had substantial experience in the trades they teach (approximately 70 percent are hired directly from industry).

Although there are no credentialing requirements for instructors in private schools, about 10 percent do have credentials, and a substantial number of the schools adhere to relatively rigid staff requirements established by trade school associations.

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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Minority Staff

Minorities comprise only 7 percent of the staffs of the 92 schools surveyed. By contrast, minorities make up more than 32 percent of Skills Center staffs. Of the schools, 58 percent have no minority instructors, and minorities make up 10 percent or more of the staffs in only 16 percent of the schools.

Table 5-4 gives the minority breakout by public and private schools. It appears that private schools hire more minorities (8 percent) than do public schools (5 percent).

Staff Training

Eighty percent of the public schools and slightly fewer than one-half of the private schools conduct major staff training programs. The public programs,

TABLE 5-4

Minority Staff in Public and Private Schools[a]

Percentage of Nonwhite Staff	Public		Private		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Average		4.6%		8.3%		6.6%
Zero	19	51.4	27	62.8	46	57.5
1 to 9 percent	13	35.1	8	18.6	21	26.3
10 percent or over	5	13.5%	8	18.6%	13	16.3%
TOTAL	37		43		80	

[a] Data collected by Olympus Research Corporation.

however, are for the most part far superior to those conducted by private schools. Public schools receive strong support from state agencies and local districts. ORC observed several impressive in-service programs conducted by the public schools themselves. These included staff briefings on such subjects as the cluster approach, open-entry/open-exit, and individualized instruction.

Because Skills Centers are actively involved in initiating innovative approaches, their need for staff training is much greater than either public or private schools that are following the more traditional approaches to education. With respect to keeping up-to-date on developments in the various trades, however, most of the IR institutions--both public and private--are performing well.

Facilities and Equipment

The IR institutions are far superior to Skills Centers in the quality of their facilities and equipment. More than 60 percent were rated as either very good or excellent. Forty percent of the facilities are new, spacious, well lighted and ventilated and are in modern environments conducive to good instruction. Predominant in this category are the new vocational training schools in Tennessee, Minnesota, Washington, and Wisconsin, as well as a substantial number of the private business schools. Few Skills Centers can compete with these facilities.

Fewer than 10 percent of the schools were rated as having "poor" facilities and equipment. The contrast between the facilities and equipment available to IR enrollees (as well as to the schools' regular student bodies) and those available to Skills Center enrollees supports the contention that a dual system exists: one for favored students and one for the disadvantaged. Skills Centers are limited in the quality of facilities and equipment they can afford to buy or rent. The Skills Center program may be very well suited to serving those who cannot qualify for entry into existing institutions, but one cannot help wondering why tax-supported facilities at least cannot be used for both clienteles.

COUNSELING AND SUPPORTIVE SERVICES

Counseling

Counseling is not considered as important or as necessary a function in IR institutions as in Skills Centers. IR enrollees have fewer attitudinal and motivational problems than Skills Center enrollees and have fewer incidents of tardiness and absenteeism. Of the 92 schools visited by ORC, 37 do not employ counselors (34 of these are private schools). Administrators of the "no-counselor" schools, however, are quick to add that instructors and administrators fill in the counseling gap, both for IRs and their regular students. Of the schools that do employ counselors, the average counselor-enrollee ratio in both public and private schools is 1:200; the corresponding ratio in Skills Centers is 1:71.

Most of the counselors interviewed by ORC do not view their role as one of providing full supportive services for enrollees, or even of providing "personal counseling" outside the realm of career guidance. This is in marked contrast to Skills Centers where counselors are the designated procurers of supportive services, and personal counseling takes precedence over all other types of counseling. Only three out of 89 counselors interviewed described themselves as "disciplinarians," yet only five mentioned "enrollee advocacy" as a counselor function. More than 50 percent of the counselors interviewed felt that their major responsibility is to provide career guidance to students. Nineteen counselors (23 percent) said that it was their duty to provide full supportive services to enrollees. Only 12 mentioned attendance checking as one of their functions (in Skills Centers this responsibility is often assigned to counselors).

Twenty-three counselors (21 in private schools) said that there was no relationship between counseling and the instructional program. These counselors believe that instructors have a major responsibility in counseling as well as teaching their students. The counselor's role is one of directing students into the "right" course and providing additional career guidance. A total of 21 counselors (15 public and six private school) said that counseling is a joint instructor-counselor responsibility. Generally speaking, counselors in IR institutions are not asked to deal with problem trainees. This is the task of the instructor and, ultimately, either an administrator or a dean of men or women.

Supportive Services

The term "supportive services" is not even understood by many of the counselors and administrators interviewed by ORC. It seems to be associated solely with "poverty" programs, and most IR counselors and administrators do not believe they are participating in a poverty program. When asked specifically to describe supportive services available to trainees, the answers were as shown in Table 5-5.

TABLE 5-5

Types of Supportive Services Provided in IR Institutions[a]

Supportive Services	Number of Public Schools	Number of Private Schools
Financial aid[b]	21	2
Welfare	12	2
Medical	6	1
Alcohol/drugs	6	1
Legal aid	6	2
Personal problems	22	5

[a] Data collected by Olympus Research Corporation.
[b] Assistance in obtaining loans or scholarships, etc.

ES Counseling

Twelve of the 92 schools (nine public and three private) stated that the full responsibility for counseling rests with ES, 18 (all public) believed that it was a joint responsibility, and 10 said they had frequent contact with ES counselors. Seventeen (13 public and four private) schools reported that they had no contact with ES counselors. Most of the ES counselors interviewed stated that IRs are the responsibility of employability teams (which work with enrollees in other programs as well), but also noted that IRs receive (and need) less counseling than other MDTA enrollees.

SUMMARY

The IR program of MDTA is serving a clientele different from that served by Skills Centers and other multi-occupational and class-size projects. IR enrollees are better educated, predominantly white, and generally less disadvantaged than enrollees in other types of institutional training. The IR program itself is geared to serve this type of enrollee. The quality of the facilities, equipment, and curricula is high, but the approach to training is traditional in nature, locked step rather than individualized, and lacking in intensive counseling and supportive services. It is hard to imagine trainees enrolled in large metropolitan Skills Centers--enrollees who have either dropped out or have been pushed out of traditional educational institutions--succeeding in the typical IR institution.

Chapter Six

The Record

The preceding chapters indicate that the IR program is more flexible in its administration, enrolls a less disadvantaged trainee, and is more traditional in nature than other types of institutional training, especially Skills Centers. This chapter examines all available data pertaining to the effectivesness of the IR program. Three general subjects are covered: (1) range of occupational offerings, (2) performance information (completion, placement, and follow-up rates), and (3) cost effectiveness measurements.

IR data are compared to two other sets of data, both of which were compiled by ORC in previous evaluations. They are:

(1) Skills Center sample: occupational, performance, and cost information for 19 Skills Centers in fiscal year 1970,[1] compiled by ORC in its "Evaluation of MDTA Skills Centers," February 1971

(2) Skills shortage sample: information on all MDTA institutional training

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[1] Because Skills Centers are not necessarily funded by fiscal year, the Skills Center sample is actually a combination of fiscal and calendar year 1970 data.

programs (excluding IRs) in 14 SMSAs during fiscal year 1970, compiled by ORC in its "Evaluation of the Effectiveness of Institutional Training in Meeting Employers' Needs in Skills Shortage Occupations," June 1972

Data pertaining to the IR program are based on an examination of the individual records of more than 3,700 IR trainees in all 12 states, who were either enrolled or scheduled to enroll during fiscal year 1970. In 11 states, the records represent nearly 100 percent of all trainees enrolled in the program; in only one state, New York, were records not obtained for all IR enrollees. The data base therefore includes more than 90 percent of all trainees enrolled in the IR program (in the 12-state sample) during fiscal year 1970. Blank spaces which occur in some of the performance or cost effectiveness tables indicate that either the sample was too small to be usable or otherwise defective. For those interested in sample sizes and/or more detailed information than are included in this chapter, see Appendix Tables A-18 through A-21.

OCCUPATIONAL OFFERINGS

This analysis compares: (1) the range of occupational offerings in the IR program to that of class-size institutional training and (2) the concentration of occupational enrollment in the two programs. The latter is more important because the nature of the IR program (individuals referred to many training courses offered by existing institutions) all but guarantees a wider range of occupational offerings. It is not certain that concentration of enrollees in one or a few areas is any different in the IR program from that in class-size training.

For example, a state may refer 200 IRs to 40 occupational offerings, yet 161 (or about 80 percent) may be in one occupational offering. A Skills Center, on the other hand, may have 200 enrollees equally distributed in 10 occupational areas. In this case, the occupational range of the IR program would be wider than that of the Skills Center, but the concentration of enrollees in one (or a few) occupations would be less in the Skills Center than in the IR program.

It should also be remembered that the typical IR enrollee can meet the entrance requirements of the school in which he is enrolled. This is not true of most Skills Center enrollees. Thus, in large metropolitan areas, the individual class-size project, the multi, or the Skills Center is the only alternative available for severely disadvantaged applicants. The IR enrollee, on the other hand, could conceivably qualify for entrance into any number of training institutions in the area. Since the range of occupational offerings is wider in most non-MDTA schools, the range of occupations into which IR enrollees can be placed is also wider. For example, most administrators of the 92 schools visited by ORC say that IRs could be enrolled in a variety of courses other than those in which they are enrolled. Trainees in individual class-size projects have only one choice, and that is limited to only a few occupational areas in Skills Centers and multi's. When data on the range of occupational offerings are reviewed, these considerations must be kept in mind.

Range of Occupational Offerings

During fiscal year 1970, the 12 IR states enrolled an average of 278 trainees in 49 occupational training programs. The range was from a low of 144 enrollees in 23 occupations to a high of 472 trainees in 95 occupations. The Skills Center sample shows an average slot capacity of 205 (the total enrollment of a Skills Center, however, could be twice that number in any given year) and an average of nine individual occupational offerings or clusters. The largest Skills Center enrolled 638 trainees in 12 courses or clusters. The skills shortage sample shows that the 14 sample cities enrolled an average of 191 trainees in approximately six individual occupational offerings. The largest program enrolled 697 trainees in 11 courses.

Clusters occur mainly in the following occupational areas: clerical, production machine, automotive, and food service. There are often smaller clusters in welding and health occupations. The largest cluster of occupations occurs in the clerical field, and it is in this area that the cluster approach is more widespread than in any other. In all areas where the cluster approach is used, ORC estimates that the average number of individual occupations in which training is offered is slightly less than twice that of the listed course offerings. Thus, if a Skills Center offers training programs in 12 occupational areas, the number of individual occupations in which training is available is about 22. It should be emphasized, however, that clerical occupations account for approximately one-half the rise in individual offerings. Clusters vary from Skills Center to Skills Center or place to place. For example, "production machine" may include six individual offerings in one Skills Center, but only two in another. "Automotive" may be clustered in one area but not in another. In almost all Skills Centers, however, clerical occupations are clustered. Again, however, clerical clusters may vary from as many as ten individual offerings in one Skills Center to only four or less in another.

It should also be emphasized that some of the courses to which IRs are referred are also clustered. For the purpose of this analysis, however, IR courses are treated as single occupational offerings. Thus, the estimated range for the IR program is on the low side, whereas the estimated range for Skills Centers is average or higher.

With these points in mind, the following conclusions can be drawn:

(1) The range of occupations in the smallest IR program (144 enrollees) is wider than that of the largest Skills Center (638 enrollees) or metropolitan program (697)

(2) The average IR program provides twice as many occupational offerings as the average Skills Center (for the same number of enrollees), and eight times the number of courses offered in the average metropolitan area included in the skills shortage sample.[2]

Concentration of Occupational Enrollment

Table 6-1 shows the concentration of MDTA enrollment within selected occupational clusters. Column (1) shows the percentage of enrollment in seven occupational groups for 3,655 IR enrollees; column (2) provides the same information for 2,732 enrollees included in the skills shortage sample, and column (3) displays

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[2] It should be noted that the skills shortage sample includes several small metropolitan areas, such as Duluth, Montgomery, Anchorage, Fresno, and Paterson, where MDTA institutional allocations are comparatively low. In addition, in New Haven, because of high allocations in other manpower programs, the institutional training is relatively small, and in New Orleans, most institutional training is sponsored by CEP and is not included in the New Orleans sample.

TABLE 6-1

Concentration of MDTA Enrollment within Selected Occupational Clusters (Fiscal years)[a]

Occupational Groups[b]	IR Enrollees 1969-1971[c] (1)[d]	All MDTA Enrollees in 14 Study Cities, 1970[c] (2)[d]	Skills Center Enrollees ORC Study (3)[d]
Clerical and sales	32%	34%	25%
All health	17	8	8
(LPN and RN only)	(12)	(2)	-
Cosmetology	13	-	-
Auto trades	7	17	21
Welding	4	10	7
Non-auto repair	3	2	4
Production machine operator	1	9	13
Food services, building maintenance, and production assembler	-	-	12
Environmental, police, child care, and constructions	-	4	-
Total in seven clusters	77%	84%	90%
All other clusters	22%	15%	9%

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[a] Generated from data collected by Olympus Research Corporation.

[b] Clerical and sales, all health, and cosmetology in column (1) = 62%.

[c] From MA-101's computer run.

[d] Sample size: (1) 3,655; (2) 2,732; and (3) 2,8500

concentration of enrollment for 2,850 enrollees included in the Skills Center sample. Although this table does not reveal how many individual occupational offerings are involved in each of the seven clusters, it does illustrate the following:

(1) The IR sample shows more training (22 percent) outside the traditional clusters than either the skills shortage or Skills Center samples.

(2) However, 62 percent of all IR enrollment, is in three predominantly female clusters: clerical and sales, health, and cosmetology.

In view of the fact that fewer than 60 percent of IR enrollment are female, it must be concluded that despite a wider range of occupational offerings, most women enrolled in the IR program are in two relatively small clusters (health and cosmetology) and one broad cluster (clerical and sales). Conversely, the range of occupational offerings (in clusters) for men in the IR program is much wider than that of other types of institutional training.

Table 6-2 breaks down IR clusters by subgroups, some of which match three-digit Dictionary of Occupational Titles (DOT) codes and some (those in parentheses) six-digit codes. The second column shows the number enrolled in each subgroup, the third column gives the percentage of the total sample enrolled in the subgroup, and the last column gives the number of individual occupations (which match six-digit DOT codes) included in each subgroup. See Appendix Table A-6 for details by state.

Table 6-2 reveals the following:

- Although occupational enrollment for women is not quite so narrow as the cluster analysis indicates (Table 6-1), two specific occupations (LPN, 14

TABLE 6-2

Occupational Offerings within Sample States
(By cluster; for fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		990		27%		63
A. Draftsman	93				9	
B. Tech. & assts. (nonmed.)	67				7	
C. Health occs.	658		18%		21	
(LPN)	(514)		(14)		(1)	
D. Misc.	172				26	
II. Clerical & sales		1,291		36		33+
A. Clerical cluster	927		26		10+	
B. Office mach. opr.	35				5	
C. Bkpg. & acctng.	137				2	
D. Money handlers	1				1	
F. Comp./data proc.	170				7	
F. Shpg. & rec. stock	5				1	
G. Misc. clerical	4				2	
H. Salesperson	10				3	
I. Whlc. salesman	2				2	
III. Service occs.		472		13		21
A. Food prep. & serv.	36				4	
B. Barbering & cosmet.	399				3	
(cosmetologist)	(333)		(9)		(1)	
C. Laundry & clean. serv.	2				1	
E. Bldg. serv.	1				1	
F. Misc. serv.	34				12	
IV. Groundskeeping		8		–		4
V. Proc. (food/cake dec.)		1		–		1
VI. Machine trades		72		2		13
A. Metal mach. & working	51				7	
B. Printing	13				3	
C. Woodworking	2				1	
D. Misc.	6				2	
VII. Mech., repairman, serviceman		519	14			25
A. Automotive cluster	319				5	
B. Truck & heavy equip. mech.	12				2	
C. Aircraft serv.	19				3	
D. Heating & cooling	40				2	
F. Electrical/electronic	92				6	
F. Misc.	37				7	
VIII. Assemblers		4	–			3
C. Electronic	1				1	
D. Wood	2				1	
F. Misc.	1				1	
IX. Benchwork		20	–			7
A. Upholstery	9				2	
B. Sewing occs.	10				4	
C. Misc.	1				1	
X. Structural occs.		182	5			12
A. Welder	113				4	
B. Constr. occs.	68				7	
C. Maint. struct.	1				1	
XI. Miscellaneous		55	2%			7
A. Transp. occs.	34				2	
C. Util./owner occs.	17				1	
D. Camera-related occs.	1				1	
F. Misc.	3				3	
(Horseshoer)	(1)				(1)	

[a] Data collected by Olympus Research Corporation.
[b] Total number enrolled = 3,614.
[c] Total number of occupations = 189.

percent and cosmetologist, 9 percent) account for 23 percent of all female enrollment. The clerical cluster, although it accounts for 26 percent of total enrollment, includes at least 10 specific occupational offerings.

- Nevertheless, about 2,000 women are enrolled in only a dozen specific occupational training programs.
- About 1,600 men, on the other hand, are enrolled in more than 177 specific occupational offerings.

With respect to concentration of enrollment for the entire IR sample, Table 6-2 reveals the following:

- A total of 63 percent of all IRs are concentrated in white-collar clusters (Roman numerals I and II). One-half of all individual occupational offerings in the IR program are included in these two clusters.
- In Skills Centers and other class-size projects, the concentration of enrollment is in blue-collar trades which represent a smaller number of specific occupational offerings.
- Thus, although the spread of specific occupational offerings in the IR program is much larger than in other types of institutional training, the concentration of enrollment--although in different clusters--is about the same (63 percent white collar for IRs, 58.6 percent blue collar for Skills Centers).

In summary, there can be no doubt that the range of occupational offerings in the IR program is wider than that of other forms of institutional training. This is less true for women than for men; in fact, with the exception of far more IRs in cosmetology courses, the range of occupational offerings for women in all forms of institutional training is about the same. The concentration of enrollment, on the other hand, is not significantly different for the two programs: The IR program concentrates primarily in white-collar trades; other institutional training in the blue-collar trades.

PROGRAM PERFORMANCE

Before ORC's performance analysis is presented, some comments are necessary on the sources and quality of information regarding performance categories. Some have serious shortcomings and should not be taken at face value. This is particularly true when performance rates vary widely from one form of institutional training to another. One major factor affecting performance information is the variation in the quality of recording and reporting procedures from one state to another. Performance information is excellent in a few states, mediocre to poor in most.

Information regarding completion rates and length of training is the most complete and valid of all performance categories. These data can be assembled directly from MA-102s (completion forms) and can be verified through examination of other information. With regard to completion rates, however, there is no universally accepted definition of "completer"; thus this category is most often given a liberal interpretation at the state and local levels.

The weakest information is that pertaining to "immediate placement." Although there is a section on the MA-102 for recording placement information, the person charged with completing the form may or may not have knowledge of whether individual enrollees have been, or are about to be placed. Whether or not such information is sought out depends to a great extent upon the pressure on the individual to complete the form. For example:

- A private, profit-oriented school may insist that MA-102s be completed as soon as possible to speed up the final payment and to impress state officials with the school's efficiency in processing paper. In such instances, the placement section may be left blank.
- A Skills Center administrator, on the other hand, who is constantly "under the gun" regarding dropout and placement rates, may hold off submitting MA-102s until as much favorable placement information as possible can be recorded. The ES may follow the same "delaying tactics" in completing monthly progress reports (MT-5s).
- A public school administrator reporting on an IR may be quite ambivalent about the MA-102 and job placement in general, considering the former "mere paperwork" and the latter "not his responsibility."

The same problems are applicable to MT-5s; in fact, most states have discontinued processing MT-5s for IR enrollees.

It should be noted that according to information extracted from completion forms (MA-102s) nearly 10 percent of all IRs leave the labor market after completing their MDTA courses, thus deflating initial placement rates by a considerable extent. Although comparable data are not available for other program types, it is safe to assume that because of the predominantly female orientation of the IR program, more IRs leave the labor market than enrollees in class-size projects.

Follow-up also varies widely from one state to another. For example, the average percentage of completers researched (or those completers that program administrators tried to reach) three months after termination, for the 12-state IR sample, is about 67. The range, however, is from a low of 19 to a high of 94 percent. With regard to the percentage of completers contacted, or those for whom follow-up forms (MA-103s) are filled out, the average is 79, ranging from a low of 39 to a high of 98 percent. Approximately the same percentages and ranges apply to the six-month follow-up sample.

The performance analyses that follow are divided into two sections: (1) an analysis of IR performance information in the 12 sample states and (2) comparison of IR performance rates with those obtained from the Skills Center and skills shortage samples. The problems discussed above should be kept in mind in reviewing these analyses.

IR Analyses

Table 6-3 presents all available fiscal year 1970 performance information for the 12 sample states. In addition to information regarding each state's program, performance rates for the program as a whole, a "typical state," private schools, and public schools are presented.

Completion Rates

The completion rate for the program as a whole and for a typical state is 65 percent; the range is from a low of 54 to a high of 76 percent. Public schools have a slightly higher completion rate (67 percent) than private schools (63 percent).

TABLE 6-3

MDTA IR Program Performance for Twelve Sample States (Fiscal year 1970)[a,b]

	Number of Different Occupations (1)	Number Enrolled (2)	Performance Percentage of Completers (3)	Performance Percentage of Completers Placed (4)	Performance Percentage of Those Placed in Training-Related Jobs (5)	Length of Training Average Number of Planned Weeks (6)	Length of Training Average Number of Actual Weeks (7)	Follow-Up Results Three Months % Employed (8)	Follow-Up Results Six Months % Employed (9)	Follow-Up Results Average of Three and Six Months % Employed (10)
Missouri	36	334	76%	75%	97%	42	36	86%	86%	86%
North Dakota	34	183	72	50	30	40	26	70	69	70
Utah	50	294	69	46	76	29	24	67	66	66
New York	48	218	67	44	71	35	28	63	64	64
Minnesota	100	420	67	41	91	42	32	67	69	68
Louisiana	26	238	66	28	91	42	32	81	79	80
Alaska	23	144	65	55	86	27	25	54	83	68
Tennessee	38	183	65	65	51	49	39	--	--	--
Wisconsin	95	472	65	44	69	42	35	65	62	64
Connecticut	22	183	58	36	87	39	22	62	70	66
California	52	298	58	--	--	33	24	43%	50%	47%
Washington	65	366	54%	44%	88%	51	30	--	--	--
lean for total program	189[b]	3,333	65%	48%	79%	40	30	69%	71%	70%
lean for 12 states (typical state)	49	278	65	48	78	39	29	66	70	68
lean for private IR schools Minus cosmetology schools	87[b]	1,164[b]	63	36	77	35	25	67	74	71
lean for public IR schools	151[b]	1,942[b]	67%	51%	79%	42	31	70%	70%	70%

[a] Data collected by Olympus Research Corporation.

[b] In order of completion rates.

The public/private school figures are interesting in that dropout rates usually increase with increases in the length of training. Yet public schools show both a longer length of training and a higher completion rate than private schools.

Placement Rates

The placement rate for completers is 48 percent for both the program as a whole and for the typical state; the range is from a low of 28 to a high of 75 percent. Public schools show a much higher placement rate (51 percent) than private schools (36 percent). Again it should be emphasized that information regarding placement rates is the least reliable of all performance data. ORC believes that the major reason for the relatively low placement rates in the IR program is that placement information is not filled in on the MA-102s or MT-5s. This "artificial" factor more than any other may account for the discrepancy between public and private school placement rates. The follow-up information presented below supports these contentions.

Training-Related Placement

Of all placements which are recorded, 79 percent are in training-related jobs. The rate for the typical state is only 1 percent lower than the rate for the program as a whole, an insignificant difference. Private schools, with a 79 percent training-related placement rate, show up slightly better in this category than public schools (77 percent).

Length of Training

The average planned length of training is 40 weeks, ranging from a low of 27 to a high of 51. The average actual length of training (a figure ORC was not able to obtain for the Skills Center and skills shortage samples) is 30 weeks, ranging from a low of 22 to a high of 36 weeks. The average length of training in public schools (31 weeks) is about five weeks longer than in private schools (25 weeks).

Follow-Up

In all states, follow-up rates (i.e., the percentage of completers contacted at three- and six-month intervals who are employed) showed marked improvement over initial placement rates. The average of three- and six-month follow-up rates for the program as a whole is 70 percent. The private school follow-up rate is 71 percent, 1 percent higher than that of public schools. The 1 percent difference is not significant, but it illustrates the dramatic difference between initial placement rates and follow-up rates. The private school placement rate is 15 percent lower than the public school rate, yet its follow-up rate is about the same or higher than the public school rate. ORC believes that this is an indication of the unreliability of placement rates rather than an indication of dramatic improvement in enrollee progress following graduation and completion.

Summary

Considering the fact that approximately 10 percent of IR enrollees leave the labor force after completing their courses, the 70 percent follow-up rate is encouraging. Those who leave the labor force may also diminish initial placement rates, but ORC believes that poor recording is as much to blame for the relatively low placement rates as any other factor. It is significant that averages for the total program show little or no deviations from averages for the typical state. This means that states with very large or very small programs do not adversely affect the total sample. Thus, the overall rates in all categories of this study should be reasonably reliable.

Comparisons with Skills Shortage and Skills Center Samples

Table 6-4 presents all available performance information for the typical IR states (average performance rates for the 12 states included in the IR sample), the typical Skills Center (average performance rates for 19 Skills Centers included in ORC's evaluation of the effectiveness of MDTA Skills Centers), and the typical city (average performance rates for the 14 cities included in ORC's "Evaluation of the Effectiveness of Institutional Training in Meeting Employers' Needs in Skills Shortage Occupations").

Completion Rates

The IR sample has a slightly higher completion rate (65 percent) than the Skills Center (62 percent) and skills shortage (61 percent) samples. Even though the differences between the three samples are not great, it is significant that the program with the longest training period has the highest completion rate, or conversely, lowest dropout rate. All things being equal, one would expect the dropout rate to rise with the length of training; however, all things are not equal among the three samples. The IR program has more women and fewer disadvantaged; most of its training takes place in rural or semirural areas where alternatives to MDTA institutional training may be fewer than in large urban areas. These factors, more than program "quality," account for the IR program's higher completion rate.

TABLE 6-4

MDTA Institutional Program Performance Data for a Variety of Samples[a]

Program Type and/or Subgroups	No. of Different Occupations or Clusters (1)	No. Enrolled or Slots (2)	Performance			Length of Training		Follow-Up Results		
			Percentage of Completers (3)	Percentage of Completers Placed (4)	Percentage of Those Placed in Training-Related Jobs (5)	Average No. of Planned Weeks (6)	Average No. of Actual Weeks (7)	Three Months Percent Employed (8)	Six Months Percent Employed (9)	Av. of Three and Six Months Percent Employed (10)
Mean for 12 IR states (typical IR state)	49	278	65%	48%	78%	39	29	66%	70%	68%
Mean for 19 Skills Centers (ORC study)	9	205	62	68	84	29-		55	57	56
Mean for all institutional MDTA in 14 cities	6	192	61%	56%	81%	25		59%	56%	58%

[a] Data collected by Olympus Research Corporation.

Placement Rates

The Skills Center placement rate (68 percent) is 20 percent higher than the IR rate and 12 percent higher than the typical skills shortage city. However, for reasons outlined previously, these comparisons are not wholly valid. The combination of poor recording and a high percentage of enrollees who leave the labor force places the IR program at a competitive disadvantage in this performance category. The relatively high post-training employment rates for the IR program (see below) appear to support this contention.

Training-Related Placement

Again, the Skills Center and skills shortage samples appear superior to the IR sample in training-related placements. The Skills Center rate is 84 percent, as compared to 81 percent for the skills shortage sample and 78 percent for IRs.

Length of Training

Information on the average actual length of training for the Skills Center and skills shortage samples is not available. However, it is obvious that the IR program has a longer training period than other types of institutional training. The average actual length of training for IRs is 29 weeks, which is equal to the average planned length of training for Skills Centers and four weeks longer than the training period for skills shortage cities. In the IR program, the actual training period is 10 weeks shorter than the planned period. If we consider dropout rates, the same should apply to both the Skills Center and skills shortage samples. If this is true, the average actual length of training would be approximately 20 weeks for Skills Centers and 15 weeks for skills shortage cities (both of these are high estimates).

Follow-Up Rates

Table 6-5 summarizes follow-up data for the IR, Skills Center, and skills shortage samples. Although it is impossible to draw any statistically valid conclusions from this information, the data appear to indicate the following:

- Attempts to contact completers (percentage "researched") are about the same for all three samples. The IR program, however, is between 10 and 18 percent more successful in actually contacting completers (percentage of researched "contacted"). Thus the larger IR follow-up sample is likely to be more representative than either the Skills Center or skills shortage samples.
- Between 12 and 14 percent more IR completers are found to be employed at three- and six-month intervals than Skills Center and skills shortage completers. Moreover, even given the differences in sample sizes, the results are statistically significant.
- Follow-up rates (percentage of contacted "employed") indicate that the post-training employment experience of the average IR completer improves dramatically with the passage of time and deteriorates at an almost equal rate for the average Skills Center enrollee. Placement and follow-up rates for completers in the skills shortage sample remain about the same. Although poor record keeping with regard to initial placement rates may be partially responsible for the apparently large gap between IR placement and follow-up rates (a difference of nearly 22 percent), follow-up rates for the three samples cannot be ignored; i.e., the IR rate is definitely higher than those of the other two samples.

TABLE 6-5

Follow-Up Rates--IRs, Skills Centers, Skills Shortage Samples
(Fiscal year 1970)[a, b]

Sample	Average of Three- and Six-Month Follow-Up Percentages: Percentage of Completers Researched	Percentage of Researched Contacted	Percentage of Contacted Employed	Initial Placement Rates
Individual referral	63.4%	76.9%	70.0%	48.1%
Skills Center	(60.0)[c]	58.1[d]	56.2[d]	71.5
Skills shortage	64.8%	66.5%	57.5%	56.0%

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[a] Data collected by Olympus Research Corporation.

[b] Because Skills Centers are not necessarily funded by fiscal year, the Skills Center sample is actually a combination of fiscal and calendar year 1970.

[c] Records for all Skills Center completers were not available to ORC. The 60 percent figure is an estimate, based on information received from persons responsible for follow-up in 19 Skills Center areas.

[d] Based on examination of 1,446 MA-103s, or about 37 percent of all completers.

This analysis assumes that the post-employment experience of all completers (in all three samples) who were not "researched" and not "contacted" is about the same as that of those who were contacted. The assumption admittedly is dangerous. However, because IR enrollees are less disadvantaged than Skills Center and skills shortage enrollees and undergo a longer period of training, it seems safe to assume that the post-employment experience of IRs would show greater improvement than those of enrollees in class-size projects. In addition, the IR program is predominantly female and is concentrated in the clerical, medical, and cosmetological clusters where the skills learned are applicable to a large number of occupations which have high turnover or attrition rates.

The MDTA "Outcomes Study"[3] supports this contention. It concludes that longer MDTA training results in significantly better post-training employment experience. It also reveals that far more IRs make use of their training in employment than enrollees in other types of institutional training (71 vs. 59 percent in "other class-size" projects, and 57 percent in Skills Centers).

Summary

Sixty-five percent of all IRs complete their courses, and if they stay in the labor market after completion, their chances of finding training-related jobs are good. The length of training in the IR program, however, is longer than in other types of institutional training, as is the period between completion and placement on the job. The post-training employment rate appears to be considerably higher for IR enrollees than for those in other types of institutional training--IR enrollees are less disadvantaged than enrollees in class-size projects, undergo a longer period of training, and are concentrated in occupational clusters (predominantly female) where the skills learned are applicable to a wide range of occupations which have high turnover or attrition rates.

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[3] MDTA "Outcomes Study," Decision Making Information (April 1972).

PROGRAM COSTS

Three distinct cost analyses are presented in this section: (1) cost analyses of the IR program, (2) cost effectiveness comparisons between the IR program and the Skills Center and skills shortage samples, and (3) analyses of public school costs.

The following points should be kept in mind when these analyses are reviewed:

- Cost figures include only educational costs billed or scheduled to be billed against MDTA appropriations:
  - -- Allowance costs are not included. To arrive at an estimate of allowance costs, multiply the number of weeks of training by $60 (average MDTA allowance).
  - -- If public schools are more widely used than private schools, the costs billed against MDTA will be low because most public schools charge the IR program only token tuitions and/or expenses for materials.
- Only the costs of private IR schools approximate the actual cost of training. Public school costs may be hidden, or paid from local or state tax revenues.
- Training costs are affected by the following (in descending order):

- -- Length of training (the longer the training, the higher the costs)
- -- Instructor-student ratios
- -- Class hours (the longer the hours, the higher the costs)
- -- Equipment (the more expensive the equipment and the more enrollee "hands-on" time, the higher the training costs)
- -- Supportive services (including counseling)
- -- Staff wages and fringe benefits

Since the above factors vary widely from state to state, comparisons between states may not be entirely valid.

IR Cost Analyses

Table 6-5 displays costs for the 12-state IR program, including: (1) costs by state, (2) average costs for the program as a whole, (3) the 12-state mean (or the "typical" state), (4) average private school costs, minus costs for cosmetology courses, and (5) average public school costs. Cost data for cosmetology courses (see Table 6-7) were subtracted from total private school costs in order to approximate the true costs of providing training in private schools. Few cosmetology schools could survive on tuition income alone; most receive up to 80 percent of their operating expenses from services provided customers by students.

Table 6-6 reveals the following:

- Average cost of providing training to IR enrollees (completers and dropouts) is $470, from a low of $155 to a high of $1,045; the 12-state mean, $500. Private schools charge MDTA $310 more per enrollee than public schools.

TABLE 6-6

MDTA IR Program Cost Data for Twelve Sample States
(Fiscal year 1970)[a]

State	Av. No. of Actual Weeks of Training (1)	Av. Training Cost per Enrolled Student[b] Planned (2)	Av. Training Cost per Enrolled Student[b] Actual (3)	Av. Training Cost per Man-Year (Projected to 52 Weeks of Training) Planned (4)	Av. Training Cost per Man-Year (Projected to 52 Weeks of Training) Actual[b] (5)	Av. Actual Cost per Completer[b] (6)	Av. Actual Cost per Placement (within 30 days)[b] (7)	Av. Actual Cost per Employed Index (Based on Mean of 3- & 6-Month Follow-Ups)[b] (8)
Alaska	25	$ 840	$ 690	$1,615	$1,435	$ 795	$1,340	$1,156
California	24	1,285	1,045	2,000	2,300	1,655	--	3,550
Connecticut	22	785	570	1,035	1,320	960	2,730	1,460
Louisiana	32	540	440	665	710	665	2,360	830
Minnesota	32	500	405	625	650	610	1,470	890
Missouri	36	415	340	515	495	435	580	510
New York	28	980	850	1,470	1,600	1,370	3,575	2,155
North Dakota	26	680	540	890	1,085	750	1,575	1,080
Tennessee	39	335	305	355	410	490	915	--
Utah	24	360	310	640	655	455	1,140	690
Washington	30	--	370	--	650	680	1,555	--
Wisconsin	35	235	155	290	230	275	600	431
Mean for total program	30	580	470	820	810	725	1,305	1,042
Mean for 12 states (typical state)	29	630	500	920	960	760	1,600	1,275
Mean for private IR schools minus cosmetology schools	25	930	665	2,020	1,480	1,210	3,145	1,705
Mean for public IR schools	31	$ 525	$ 355	$ 715	$ 655	$ 530	$2,240	$ 755

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[a] Data collected by Olympus Research Corporation.

[b] Costs represent only education costs billed to MDTA.

TABLE 6-7

MDTA Institutional Program Cost Data for a Variety of Samples[a]

Program Type and/or Subgroups	Av. No. of Actual Weeks of Training	Av. Training Cost per Enrolled Student[b]		Av. per Man-Year Training Cost (Projected to 52 Weeks of Training)[b]		Av. Actual Cost per Completer[b]	Av. Actual Cost per Placement (within 30 days)[b]	Av. Actual Cost per Employed Index (Based on Mean of 3- & 6-Month Follow-Ups)[b]
		Planned	Actual	Planned	Actual			
Mean for private IR schools minus cosmetology schools	25	$ 930	$665	$2,020	$1,480	$1,210	$2,610	$1,705
Mean for public IR schools	31	525	335	715	655	530	865	755
Mean for IR cosmetology schools	33	480	395	600	600	650	1,765	1,000
Mean for 12 IR states (typical IR state)	29	630	500	920	960	760	1,600	1,275
Mean for 19 Skills Centers (ORC study)	--	--	850	2,880	$3,250	1,400	2,210	2,490
Mean for all institutional MDTA in 14 cities[c]	25[d]	$1,030	$930	$2,380	--	$1,437	$2,860	$2,420

[a] Data collected by Olympus Research Corporation.

[b] Costs represent only education costs billed to MDTA.

[c] Typical city (fiscal year 1970), ORC Skills Shortage study.

[d] Actual number of weeks of training not available for skills shortage cities; this figure represents planned rather than actual length of training.

- Average per man-year cost of the IR program (cost for providing 52 weeks of training) is $810, from a low of $230 to a high of $2,300; the 12-state mean, $960. Private schools charge MDTA more than twice as much per man-year of training ($1,480) as public schools ($655).
- Average cost per completer in the IR program is $725, from a low of $275 to a high of $2,300; the 12-state mean, $760. Private schools charge MDTA $1,210 per completer; public schools, $530.
- Average cost per placement is $1,305, from a low of $600 to a high of $2,730; the 12-state mean, $1,600. Private school placements cost MDTA more than three times as much as public school placements.
- Average cost of follow-up employment drops to $1,042 for the entire program, from a low of $431 to a high of $3,550; the 12-state mean, $1,275. The average MDTA cost for private school follow-up employment is $1,705; the corresponding figure for public schools, $755.

States which allocate large percentages of their IR funds to private schools have far higher average costs than those which use primarily public schools. Wisconsin, for example, which has the lowest costs of the 12 states included in the sample, makes heavy use of public schools. Again, it should be emphasized that public school costs do not reflect total training costs, only that part of the training charged against the MDTA program.

There are some critics who argue that because most public schools are "free" to residents of local areas, they should be equally "free" to MDTA enrollees. (This subject is discussed in the next section of this chapter, "Public School Costs.")

Some states may have legitimate reasons for contracting with private schools. One such reason is that public schools, because of waiting lists or entrance requirements, will not accept MDTA referrals.

Cost Effectiveness Comparisons

Table 6-6 provides the following cost data: (1) average 12-state IR costs, broken down by average private school costs (minus cosmetology), average public school costs, and average cosmetology school costs; (2) average Skills Center costs; and (3) average costs for the cities included in the skills shortage sample.

This analysis reveals that in terms of federal dollars expended for institutional training, the IR program is the least expensive in all categories. The IR program provides more training at less cost than other class-size programs. This is particularly true when comparisons are made between public and private cosmetology school costs and other class-size programs (both the Skills Center and skills shortage samples); but it is substantially true of the IR program as a whole.

The overall cost superiority of the IR program, however, is primarily due to the utilization of public schools which on the average charge the MDTA program less than the full cost of the training provided. The differences between private school IR costs and either Skills Center or skills shortage city costs are slight and can be accounted for by such factors as the amount of supportive services and counseling provided by class-size programs, the longer class hours, and the larger percentages of disadvantaged being served by Skills Centers and other class-size programs.

This leads to the interesting question as to whether MDTA is subsidizing the public schools or being subsidized by them. Should, could, or would public schools provide training for MDTA applicants without financial assistance from the federal government? The answer is affirmative--public schools can provide and are providing training to IRs at a lower cost (to MDTA) than the program could purchase from private schools. Nevertheless, public schools (which are supposedly free) are charging the federal government an average of $335 per man-year of training. Since many schools do not charge the MDTA program at all, it is obvious that some schools are charging well over the $335 average rate. Whether these costs are justified is beyond the scope of this study, but they deserve scrutiny.

PUBLIC SCHOOL COSTS

All cost data thus far presented involve charges made against MDTA allocations by private and public schools. Because of federal laws and regulations relating to public contracts with private companies and because of the nature of doing business with profit-making companies or corporations, private school charges against MDTA closely approximate the actual cost of the training given (part of which goes to advertising and profits). Public school costs have little or no relationship to the true cost of public school training. In many cases, public schools do not charge MDTA for enrolling IRs; in most cases, MDTA is billed for only a small portion of the actual training costs. The result is a bargain for MDTA administrators who wish to obtain maximum mileage from a fixed program allocation. However, taxpayers somewhere are obviously picking up the remainder of the actual training costs. The following analysis attempts to answer the questions: What is the true cost of training in public schools? How does it compare with the cost of training in private schools?

Methodology

The purpose of this analysis is to obtain a low side estimate of the average true cost of providing one man-year of training in public schools. The data for this analysis were obtained in the field. The following questions were asked of administrators of all 92 schools visited (public and private):

(1) How many full-time staff do you employ, and what does "full-time" mean?

(2) What is the school's schedule of operations (hours per day, classes per day, days per week, months per year, length of courses)?

(3) What is the average yearly wage for all staff; for instructors; for administrators; other? What is the time basis (10 months, 12 months, etc.)? What is the value of fringe benefits (employer contributions)?

(4) What is your total annual operating budget and what does it include?

(5) What are the percentages of total operating costs which are spent on the following:

    (a) Wages, salaries, and fringe benefits
    (b) Facilities, equipment, supplies, and materials
    (c) Maintenance and utilities
    (d) Debt services, etc.

(6) What is your current and average annual enrollment or full-time equivalent enrollment, and how have they changed over the past three years?

Many administrators could not provide answers to all these questions, either because they did not know or because they did not believe they were free to disclose such detailed fiscal information. Of those who provided relatively complete information, ORC screened out all schools where there were inconsistencies in the data. In addition, the sample chosen for the final analysis was restricted to post-secondary vocational and/or technical institutions or to schools which are not academically oriented (such as junior and some community colleges). Three additional criteria were applied before the final sample was chosen: (1) Only schools in smaller urban or rural areas were selected, (2) only the most fiscally sound and well-administered institutions were included in the sample, and (3) in order to make certain that the average cost for public school training would be on the low side, schools in high-cost areas were screened out.

Computation

ORC ended up with a sample of ten public vocational and/or technical institutes (Table 6-8) upon which the following methods of computations were used to obtain the average man-year training cost:

- Total annual operational cost (figures on a 12-month basis) divided by the average full-time enrollment during the school year
- Total annual operational cost divided by the total man-years of training provided
- Total annual operating cost divided by the average number of full-time students and multiplied by the length of the school year (in months)

TABLE 6-8

Estimated Man-Year Costs of Training Ten Public Vocational Schools[a]

School Code	Total Estimated Annual Budget or Cost[b]	Length of School Year[c]	Average Enrollment	Estimated Man-Years Cost of Training[d]
1	$ 191	9.5	78	$3,090
2	4,234	9.5	1,700	3,150
3	3,400	9.5	1,200	3,580
4	585	9.0	400	2,100
5	650	9.0	540	1,600
6	500	12.0	550	910
7	325	12.0	300	1,080
8	555	9.5	225	3,370
9	6,500	12.0	1,800	3,610
10	$ 967	9.0	400	$3,220

[a] Data collected by Olympus Research Corporation.

[b] Thousands of dollars

[c] In months

[d] Average of the ten is $2,570.

The three lowest cost schools are located in the South; the remaining seven are in the Mid-west. Both the average cost ($2,570) and range of costs (from $910 to $3,610) are similar to those of Skills Centers, most of which are located in large metropolitan areas (average cost per man-year is $2,880, the range is from $1,160 to $4,900). Unlike Skills Centers, none of these schools provide eight hours of instruction per day; in most cases, they provide substantially less. Nor do they provide the supportive services or heavy counseling that Skills Centers are obligated to provide. In only a few schools was any debt service or facility and equipment amortization included in the operating budget, and unlike private schools, substantial funds were not earmarked for advertising or profits

It should also be noted that because the length of training, both planned and actual, is substantially longer in public schools than in either private schools or Skills Centers, the true, full cost of any program that provides trainees with allowances is bound to be more expensive in public schools.

Although the above analysis is based on estimates, the data and schools selected for analysis were chosen in order to obtain a low side average cost for public school training. Further research and refinement of these data would probably substantiate ORC's findings and emphasize their conservative nature.

SUMMARY

The analyses contained in the preceding portions of this chapter lead to the following conclusions:

- The IR program provides a wider range of occupational enrollment, but concentration of enrollment is in the white-collar trades. The occupational range of Skills Centers and other class-size projects is narrower than that of the IR program, but the concentration of class-size enrollees in blue-collar trades is almost equal to IR concentration in white-collar occupations.

- Women IR enrollees are concentrated in three clusters of occupations: clerical and sales, health, and cosmetology. The range of occupational offerings for women is quite narrow compared to that of men and not much greater than the range for women in Skills Centers and other class-size programs. This is true despite the fact that the IR program is predominantly female.
- Although the difference in completion rates for IRs and enrollees in class-size projects is not significant, the typical IR enrollee has a better prognosis for employment (utilizing his newly acquired skills) than enrollees in class-size projects. This is because IR enrollees are less disadvantaged than class-size trainees and receive longer periods of training.
- With respect to federal funds allocated for education costs under MDTA, the IR program has a better cost effectiveness record than class-size institutional training. Class-size projects, however, must pay their own way, whereas the IR program makes heavy use of existing public schools which do not bill MDTA for the full cost of training.
- In terms of the full cost to the American taxpayer of achieving the objectives of the institutional training program, ORC's conclusions are as follows:
    - IR training is more costly in public schools

  - IR training is less costly in private schools
  - The costs of Skills Centers and other class-size projects fall between public and private IR training

The range of these cost differences is relatively narrow and insignificant. Thus nonfinancial considerations could be more important than "program costs" in policy decisions regarding allocation of funds by program type.

- The range of costs effectiveness rates within each program type (state-by-state IR programs; Skills Center by Skills Center; and city-by-city, class-size projects) is extremely wide, indicating that existing overall cost effectiveness rates could be improved.

Chapter Seven

Noteworthy Schools and Practices

Most of the institutions visited by ORC in connection with this evaluation were traditional in nature, had entrance requirements which screened out the seriously disadvantaged, and were comparatively inflexible in their administration. There were, however, exceptions to this general rule. This chapter is concerned with these exceptions. The material is presented in two sections: (1) "Administrative Practices" and (2) "Noteworthy Schools."

ADMINISTRATIVE PRACTICES

The administrative practices noted in this section were selected on the basis that they appear to be solutions to problems that are generally universal. Among the problems discussed are the following: (1) elimination of red tape in the selection of private schools, (2) IR referrals to Skills Centers and/or community colleges, (3) follow-up and evaluation, and (4) provision of special services for the disadvantaged.

Elimination of Red Tape in the Selection of Private Schools

In some states, one of the most abrasive conflicts between ES and vocational education staffs is the excessive time lag between the selection and approval of a school (mainly private) for an IR and the time the enrollee actually starts his training. The major cause of delay is the time involved in obtaining vocational education approval of the selected school. The MT-3 must go through channels (both ES and vocational education) before it is returned to the local ES office and the applicant can begin his training. In at least one state, this problem has caused a drastic reduction in the IR program, but it is a problem in many other states as well. Two methods are being used in certain states to overcome this problem: blanket contracts, and approved lists for several states.

- Blanket Contracts: In the state of New York, contracting procedures require that all state contracts, regardless of size, be approved by the state attorney general's office. In order to avoid time lags, the state executes "blanket contracts" with approved private schools, even before IRs have been enrolled. The list of schools covered by these contracts is provided to local ES offices. ES staff may then refer applicants to one or more of the schools with which the state has contracted. Vocational education then fills out the blanket contract and attaches it to the MT-3.
- Approved Lists (Several States): Local ES offices are provided with lists of approved private schools by state departments of vocational education. As in the New York situation, ES may then refer enrollees to these schools without further vocational education clearance. Contracts are executed after the fact.

States which have adopted these techniques have all but eliminated time lags caused by excessive clearance procedures. The chief objection to these techniques is that vocational education loses its responsibility for designation of the training institution. Since (as in the case of New York) the blanket contract is executed by the state department of vocational education (and with respect to states which use "approved lists," the lists are prepared by state departments of vocational education), ORC does not believe that the objection is valid.

IR Referrals to Skills Centers or Community Colleges

In several states, a certain number of allocated IR slots are earmarked for Skills Centers, or a subproject for IRs is created within the Skills Center. In Alaska, this system is used to help finance the Skills Center in Seward. Because of the absence of public and private schools willing to accept Alaska's severely disadvantaged native population, the only alternative is to use the Skills Center as an IR institution. Those Skills Centers that are operated by large community colleges become, in essence, large IR programs (Denver and Portland). The latter system, however, depends upon the community college's willingness to accept the disadvantaged, a situation which appears to be the exception rather than the rule.

Follow-Up and Evaluation (Minnesota)

The most noteworthy follow-up and evaluation system observed by ORC is in Minnesota. Although it does not apply specifically to the IR program (or to other forms of institutional training), it is the most detailed and comprehensive system existing in any area of the nation in which ORC evaluations have taken place and could be easily adapted to the institutional training program. Every two years a team of 80 specialists from private industry conducts an intensive on-site evaluation of each school's program. In alternating years, the schools perform thorough self-evaluations designed by the state. In addition, the state has contracted with the University of Minnesota to perform follow-up for all area vocational-technical schools. Data are gathered through mailings to schools, students, and employers. The resulting computer runs include performance data by occupation, school, and area.

Provision of Special Services for the Disadvantaged

In some sparsely settled states (North Dakota, Wyoming, Utah, Alaska, etc.), there is a lack of educational institutions geared to serve adults who are in need of remedial education, prevocational training, and other special services. One state, North Dakota, overcame this problem by establishing a Prevocational Center in Bismarck to serve the entire state. The program of this Center is discussed in the following section. It is mentioned here because it was created by administrative action. Such action might well be considered in other areas faced with the same or similar problems.

NOTEWORTHY SCHOOLS

The schools described in this section are deserving of special recognition in this evaluation because of one or more of the following features: (1) overall approach to education, (2) special innovative techniques, or (3) special services for adult clientele. Not all the schools waive entrance requirements for IRs or are specifically designed to serve the total MDTA clientele. The purposes and objectives of these schools, however, appear to be consonant with the purposes and objectives of the institutional manpower training program.

Prevocational Training Center

This Center was established in Bismarck, North Dakota, in August 1966 by the state to provide vocational exploratory opportunities and basic education for youths and adults throughout the state who are in need of these services. Trainees are referred to the Center by local ES offices throughout the state; only applicants whose computational or communications skills are below the 9th-grade level are referred.

The Center is operated by the Bismarck Public School District, in cooperation with the state board of vocational education and the North Dakota Bureau of Employment Security. It has separate facilities, however, and is funded primarily from MDTA allocations. Its administration is predominantly independent of other public schools in the district.

The vocational exploratory areas include: arts, auto body, auto mechanics, baking, bookkeeping, carpentry, cosmetology, drafting, electronics, engine repair, filing, housewiring, nursing, plumbing, sewing, sheet metal work, shorthand, typing, and welding. Some of these programs are conducted at the Center, but several are given in cooperation with local employers at their work sites.

The trainee chooses his own daily schedule by listing the classes he plans to attend on a "sign-up sheet." The day is divided into two-hour periods, and trainees are encouraged to try many different vocational areas. They are also encouraged to spend at least one period a day in basic education. Although some reject this advice, the majority sign up for two periods (four hours) a day.

The curriculum for each exploratory area is completely individualized. "Job orders," with well-defined performance objectives, are assigned to each enrollee. Enrollees complete these job orders at their own pace. Trainees usually try five or six areas before a final selection is made. Each trainee's progress is closely monitored and reviewed by the administration, instructors, and counselors. Group guidance sessions on attitudes, grooming, budgeting, etc., are also conducted. Students punch a time clock, attend a full eight hours per day, and make their own living arrangements.

The average length of stay at the Center is from 14 to 16 weeks. The staff determines when and if a trainee is ready for regular vocational training. The Center then recommends the type of training, the facility, and a starting date for the trainee. Approximately 13 percent do not go on to further training. The total enrollment is limited to 50 students. A study conducted in 1970 showed significant increases in reading and math levels and the number obtaining GEDs.

Pretechnical Programs

Pretechnical programs, similar to the North Dakota prevocational program are conducted at two Utah technical colleges in Salt Lake City and Provo and at the Milwaukee Area Technical College in Wisconsin. The Milwaukee program, called prevocational, uses a "multidimensional" approach. Programmed hardware, reading laboratories, and other instructional materials are used, which allow students to improve their basic education skills by using their individual cognitive abilities at their own pace. The Milwaukee and Utah programs also feature field trips, outside speakers, individual and group counseling, and work-sampling techniques.

Linn Technical College

The president of the technical school in Linn, Missouri, said that the school is an institution where "no student will be denied an education because of lack of funds or inadequate preparation." The school's purpose is to "help those students who do not or cannot attend a traditional college. . . . [T]his alternative is an inherent right in American education."

This is the philosophy of a school that started in 1961 with one course, 40 students, and no financial support from the public schools. It now occupies seven buildings with 540 students in five broad occupational areas.

Linn Technical College is a "terminal" institution strongly oriented toward and funded primarily by industry. It is designed to provide an intensive and practicable program which will enable graduates to become employable after two years of study. The main objective of the school is employment rather than transfer to four-year colleges or universities. Courses include: auto body, auto mechanics, aviation technology, design/drafting, electronics, machine tool, computer maintenance, basic education, and related theory. All students are required to take basic reading for 12 weeks. After completing the reading course, they are tested.

If they fail the test, they are assigned to remedial courses that can start from the 3rd-grade level. Students in vocational classes can advance in any occupational area as far as their individual interests and capabilities will take them.

The school's completion rate on a two-year basis is a phenomenal 85 percent. Between 90 and 92 percent of all completers are placed; approximately 25 percent of the student body are classified as disadvantaged. The schools seeks students through the "Missouri Educational Talent Search," an outreach for the disadvantaged.

La Puente Valley Vocational Center

La Puente Valley Vocational Center in Industry, California, is a full-time, 12-month, day-and-night vocational complex located in the Los Angeles metropolitan area. A student may enter the Center at any time and may transfer from day to night or night to day classes if necessary. Classes are in session all year round (12 months).

Courses are offered in 18 major occupational areas and several electives, including: ESL, GED preparation, and cultural and avocational subjects. The vocational courses emphasize the practical aspects of the job; lectures are kept to a minimum. Courses are set up on a strictly individualized basis, using performance objectives.

The school has a programmed instruction laboratory designed for study on an individualized basis, using programmed texts, controlled readers, and supplementary materials. Programs have also been developed for deaf students under the direction of four staff dactylologists. The school offers a "Work Evaluation

Program" or work-sampling program to assist students in making occupational choices.

This is an institution dedicated to serving its community in the broadest sense. Although the school wants to be identified as community oriented, it does not want to be identified as a community college because of the "academic stigma" attached to the word "college."

Spokane Community College

The Spokane Community College is part of the Washington State Community College System which came into being in 1967. However, it differs from other community colleges in that it is actually composed of two separate and distinct "colleges." Each college has its own president, administration, and instructional staff. One is a modern 118-acre campus designed primarily for students with academic aspirations; the other is an extension and reorganization of the 47-year-old Spokane Technical and Vocational School, which is 90 percent occupationally oriented.

Among the latter's objectives are to provide supplemental training, retraining to meet new job opportunities, and other educational services (including adult education) as dictated by community needs. Although the school serves one of the largest geographical districts in the state by means of 14 organized "educational centers," its programs are brought to every area of the district, including Indian reservations.

Clark Community College

This school in Vancouver, Washington, "believes in the total development of the individual" and provides counseling and guidance services to "help the student in his personal, social, and intellectual growth." Based upon on-site observation, we found the school to be successful in fulfilling this objective. Several innovative programs in motivational techniques (200MM) and a guidance occupational information access system (OSCAR) have been attempted by the school. However, the administration believes that because of limited resources, not enough individual attention is given to IRs in orientation, career guidance, and supportive services.

Clover Park Education Center

Clover Park in Tacoma is not a part of the Washington State Community College System but a local vocational center under a local school district. The school offers 52 occupational courses, including some which are unique (commercial fishing, commercial aviation, aviation and power plane, and motel/hotel management). Most courses are set up on a cluster basis and provide for continuous open-ended enrollment and spinoffs. Basic education is integrated with vocational training and is required only to the extent that it is necessary to perform competently in the occupational area.

The school has no standard entrance criteria; admission to a course is subject only to acceptance by the instructor (which can be a problem for some applicants). The instructor is also responsible for related theory, employability training, placement, and most counseling. Instructors are hired from industry and trained as teachers by the institution.

The facility is a converted, ex-navy supply corps base on 120 acres. The school has done most of its own remodeling. New buildings have been added, including a new aviation building with a control tower. The aviation course is approved by the Federal Aviation Administration.

Tennessee State Area Vocational Technical Schools (AVTS)

The Tennessee education system has well-defined roles for its post-secondary institutions. All such schools are divided into four distinct levels:

- Area vocational technical schools which are strictly vocationally oriented and designed to train below the technical level.
- The technical school which offers advanced vocational training with emphasis on expanded theory. Such training may lead to an AA degree or continuation into higher education.
- Junior colleges which are strictly academically oriented.
- Four-year colleges and universities.

The area vocational technical schools are particularly well suited for IRs. These schools are charged by the state's department of vocational education to be innovative. They operate from a common catalog, but course offerings vary from school to school to avoid duplication in costly equipment and to serve particular needs in different localities.

All operate on an open-entry/open-exit basis, use the cluster approach, and are in the process of developing some rather sophisticated individualized instruction techniques. Some of the more impressive examples observed are:

- Nashville AVTS: The basic electricity course in Nashville is a good example of individualized occupational training. The course is divided into five competency levels, with a series of modules and objectives for each level. Students work their way from module to module and progressively higher levels at their own pace. Upon completing the fifth level, they can either seek employment or remain in the shop to seek first- or second-class licenses. If they elect to seek employment before completing the course, they are encouraged to continue in night classes (school remains open until 11:00 p.m.).
- Athens AVTS: An Athens electronics instructor was reluctant to switch from traditional teaching techniques but is now enthusiastic about individualized instruction. He has developed performance objectives, with supportive instructor sheets, tapes, and other resource materials. His students work on their own, at their own pace, with minimal need for communication with the instructor.
- Memphis AVTS: This school is particularly responsive to the needs of the disadvantaged and serves a heavy percentage of minorities (53 percent are blacks). The school has a particularly good remedial education program, or "adult learning service," including a reading laboratory and programmed instruction.

Louisiana Vocational Technical Schools

Louisiana's vocational technical schools are also committed to the open-ended approach, with individualized instruction, but their programs are still in the formative stage. The schools are extremely industry/advisory committee oriented and work hard at community involvement.

The electronics course in the Crowley area vocational technical school is particularly well designed for individualized instruction. The Shreveport area vocational technical school conducted a study of vocational and technical skill needs in its two-county area, which it uses as a basis for its occupational offerings and curricula.

Staples Area Vocational Technical School

The AVTS in Staples, Minnesota, has an open-door policy: All ES referrals are accepted without question. The school's counseling program (personal and full supportive counseling) is one of the best observed by ORC. A curriculum development committee is currently preparing to overhaul all courses to meet requirements for open-entry/open-exit, individualized instruction and a more sophisticated cluster approach.

Anoka Area Vocational Technical School

The school in Anoka, Minnesota, also has an open-door policy and is on the brink of a break with tradition by introducing an open-ended curriculum. Anoka also has an excellent orientation program, consisting of a three-day workshop and work-sampling program. The counseling staff seeks out IRs on a regular weekly basis to check their progress and provide personal in-depth counseling if needed.

North Central Technical Institute

This institute in Wassow, Wisconsin, is an example of one of a series of schools in the state committed to superior vocational education facilities and equipment. It has one of the highest enrollment of IRs (63) of all the schools visited. The school strongly encourages student participation in various clubs for purposes of "personal development." It conducts a follow-up study to determine the relationship between such activities as job retention, earning power, and progress into supervision and management.

North Central is also strong in staff training. Of particular interest was a five-day, faculty, in-service program called "Meeting Individual Student Needs," which covered such subjects as: new concepts in instruction, special improvement projects, TV workshops, and micro teaching.

Academy of Trades

A private trade school in the Watts area of Los Angeles, the academy is performing the most concerted effort (of all 92 schools visited) in the areas of orientation and counseling. The school has six full-time counselors on the staff. The orientation program is built around "A Student Guide to Maximum Achievement in the Service Trades during and after Academy Training," which is one of the few written guides for helping students that ORC discovered in the schools.

Courses are open ended and clustered, and individualized instruction techniques are used. Basic education and employability training are also part of the curricula.

South Bay Trade School

An extremely impressive private school in San Diego offers training in the heavy metal trades, welding, drafting, and auto mechanics. The South Bay school's approach is progressive, realistic, and geared to industry needs. Each student is placed immediately into a simulated job environment; e.g., a large, full-scale ship compartment, complete with fittings, bulkheads, railings, etc.

Each student is trained as an individual, at his own pace. Courses are divided into levels (a modified cluster approach), with phased objectives. The school also offers a two-day orientation and prevocational program through which new students are introduced to the school and all its occupational offerings. A trade vocabulary-language program is also offered for those with language problems. The school provides full supportive counseling and strong placement assistance for completers.

SUMMARY

It is difficult to generalize about the material contained in this chapter except to say that a few states have managed to cut red tape, thus facilitating localized decision making and better service to MDTA clients. Some schools are beginning to experiment with progressive management and teaching techniques; some in primarily rural states have devised ways and means of delivering specialized services through the IR program that otherwise would not be available to MDTA clients. No system currently exists by which states can exchange this kind of information. If such an exchange system could be instituted, the adoption of innovative methods and techniques in administering the IR program might be accelerated.

APPENDIX

The tables in the Appendix are as follows:

A-1 Federally Obligated Funds and Slot Allocation

A-2 IR Enrollee Characteristics

A-3 IR Enrollee Characteristics by Type of Training: All States

A-4 Enrollee Characteristics for Two ORC Studies

A-5 Public and Private IR Enrollment

A-6 thru A-17 Occupational Offerings within the State of:

- Alaska
- California
- Connecticut
- Louisiana
- Minnesota
- Missouri
- New York
- North Dakota
- Tennessee
- Utah
- Washington
- Wisconsin

A-18 IR Program Data by State

A-19 Skills Shortage Program Data by City

A-20 IR Program Data by Occupational Cluster

A-21 IR and Skills Shortage Data: Various IR Components

TABLE A-1

Federally Obligated Funds and Slot Allocation (Thousands of dollars)[a]

State/ Fiscal Year	IR		Skills Centers		Total Institutional		Total MDTA	
	Slot	Funds	Slot	Funds	Slot	Funds	Slot	Funds
Alaska								
1971	155	$ 394	160	$ 833	600	$ 2,031	800	$ 2,175
1970	176	282			600	1,990	700	2,185
1969	175	277			600	1,152	800	1,416
California								
1971	744	5,385	2,488	10,979	12,600[b]	31,501	18,500	37,678
1970	392	1,152			9,900	30,830	14,700	37,092
1969	1,338	4,340			10,100	30,239	15,100	37,131
Connecticut								
1971	115	292	550	1,133	3,200[b]	3,229	4,300	4,871
1970	240	480			2,000	2,875	3,900	4,310
1969	200	400			800	1,037	5,400	4,731
Louisiana								
1971	260	729	0	0	1,400	3,870	2,600	4,911
1970	200	544			1,200	3,570	2,600	4,395
1969	243	461			900	2,814	2,700	4,051
Minnesota								
1971	375	860	1,106	2,086	2,300	6,224	2,700	6,951
1970	425	1,218			1,900	5,212	3,200	6,158
1969	250	892			2,000	3,918	3,100	4,893
Missouri								
1971	200	653	600	$ 1,701	4,400	6,533	6,100	7,384
1970	306	1,012			3,400	6,116	3,900	6,690
1969	205	$ 510			2,200	$ 4,274	3,000	$ 5,445

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[a] Data collected by Olympus Research Corporation.

TABLE A-1 (cont.)

State/ Fiscal Year	IR		Skills Centers		Total Institutional		Total MDTA	
	Slot	Funds	Slot	Funds	Slot	Funds	Slot	Funds
New York								
1971	480	$1,361	4,704	$14,309	5,200	$22,228	10,500	$35,553
1970	701	2,231			6,800	20,362	13,600	29,216
1969	235	655			6,600	19,132	9,600	21,481
North Dakota								
1971	150	400	0	0	400	681	600	1,243
1970	188	658			200	759	500	1,164
1969	83	239			500	988	900	1,337
Tennessee								
1971	364	792	160	698	1,300	4,475	2,700	5,159
1970	250	589			2,900	4,609	4,300	5,311
1969	400	912			1,900	3,690	5,800	5,989
Utah								
1971	120	337	160	652	900	2,266	1,100	2,555
1970	110	253			500	1,467	1,000	1,787
1969	137	269			400	1,061	900	1,545
Washington								
1971	500	1,495	185	360	3,600	4,127	4,500	5,724
1970	500	1,493			2,000	4,206	3,600	5,170
1969	640	1,326			1,900	3,068	4,000	4,244
Wisconsin								
1971	395	1,130	215	$ 524	2,100	4,685	3,500	6,697
1970	445	1,206			2,100	4,355	3,900	6,045
1969	30	$ 851			2,100	$ 4,418	3,900	$ 6,570

[a] Data collected by Olympus Research Corporation.
[b] Includes part-time.

TABLE A-2

IR Enrollee Characteristics by State (Fiscal years 1969-71)[a]

Characteristic	All States	Alaska	Calif.	Conn.	La.	Minn.	Mo.	N.Y.	N.D.	Utah	Wash.	Wisc.
Sample[b]	3,818	158	215	280	271	683	370	566	107	245	793	130
Age (in years):												
Average	28.6%	30.3%	29.5%	29.2%	27.1%	27.7%	30.2%	27.8%	27.0%	29.2%	28.8%	28.9%
Standard deviation	9.7	10.4	9.6	8.7	9.4	9.7	9.9	9.2	8.7	10.9	9.9	9.6
Sex:												
Male	41.8	25.3	57.7	29.3	13.0	49.1	33.1	47.4	80.4	55.5	38.8	43.8
Female	58.2	74.7	42.3	70.7	87.0	50.9	66.9	52.6	19.6	44.5	61.2	56.2
Marital status:												
Married	31.6	31.0	33.2	29.3	31.5	31.9	36.3	28.5	36.8	48.6	27.2	23.8
Primary wage earner:												
Yes	79.8	75.9	95.8	73.5	61.9	75.4	85.9	74.3	80.4	82.9	88.1	81.4
Head of household:												
Yes	65.0	69.6	71.0	62.0	57.4	61.8	67.9	65.5	52.3	71.8	66.3	66.7
Number of dependents:												
No dependents	43.4	35.0	41.9	44.3	45.9	44.0	32.2	49.6	52.3	36.7	46.6	36.9
1-2 dependents	34.8	43.3	34.9	34.3	34.9	31.9	42.6	30.5	24.3	40.9	33.1	42.3
3-5 dependents	18.3	18.5	18.2	19.6	17.7	19.9	21.2	16.9	15.9	19.5	16.1	17.8
6 or more	3.6	3.2	5.1	1.8	1.5	4.3	4.1	2.9	7.5	2.9	4.2	3.1
Race and ethnicity:												
White	77.4	c	43.2	61.3	68.9	94.8	c	68.0	95.3	78.8	81.2	73.1
Negro	17.4	c	48.8	37.6	30.7	1.6	c	26.3	0.0	15.5	10.6	14.6
Spanish surname	6.8	0.0	17.2	15.0	1.1	11.3	4.9	5.1	0.9	3.3	5.0	4.6
Other minority	4.9	c	8.0	1.1	0.4	3.6	c	5.7	4.7	5.7	8.2	12.3
Public assistance:												
Yes	20.4	36.1	31.3	28.4	7.8	23.4	15.7	20.1	10.3	13.9	19.1	20.0
Disadvantaged:												
Yes	71.3%	57.0%	94.4%	74.0%	70.4%	69.4%	55.7%	72.8%	72.6%	65.3%	74.9%	82.9%

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[a] Data collected by Olympus Research Corporation.
[b] These numbers = 100% for each column.
[c] Unknown is 20% or more of total.

TABLE A-2 (cont.)

Characteristic	All States	Alaska	Calif.	Conn.	La.	Minn.	Mo.	N.Y.	N.D.	Utah	Wash.	Wisc.
Educational attainment:												
8 years or less	5.7%	9.5%	6.5%	4.0%	3.3%	4.2%	5.7%	8.7%	15.0%	2.4%	4.8%	7.7%
9-11 years	30.2	23.6	34.7	52.2	25.2	22.1	26.9	35.8	51.4	27.9	26.3	33.1
12 years or more	64.1	66.8	58.9	43.9	71.4	73.7	67.5	55.5	33.6	69.6	68.8	59.2
Average (years)	11.3	11.2	11.2	10.9	11.4	11.5	11.4	11.0	10.3	11.6	11.4	11.2
Standard deviation	1.4	1.6	1.6	2.4	1.2	1.3	1.3	1.5	1.6	1.3	1.4	1.8
Range	2-18	5-16	5-17	6-14	7-14	6-16	7-15	3-15	3-12	3-15	2-18	2-16
Years of gainful employment:												
3-9 years	35.9	38.0	39.1	41.3	27.7	32.9	46.9	38.5	34.6	29.8	33.4	34.6
10 or more years	16.0	17.7	20.0	19.2	10.9	13.7	19.1	14.0	22.4	22.9	14.5	13.1
Hourly wage/last full-time job:												
Under $1.50/hr	18.7	11.5	8.5	5.5	44.2	22.8	24.9	c	31.2	25.0	17.4	17.6
$2.50 and over	23.3%	53.9%	35.7%	32.3%	5.2%	22.4%	15.9%	c	16.1%	20.7%	23.4%	19.3%
Average wage	$2.03	$2.66	$2.32	$2.25	$1.49	$2.00	$1.91	c	$1.83	$1.91	$2.02	$1.99
Income:												
Below poverty level	73.2%	61.2%	87.6%	52.2%	71.2%	82.6%	59.7%	65.6%	73.1%	66.9%	84.6%	76.0%
Employment status prior to enrollment:												
Underemployed	21.1	16.5	14.9	18.0	14.4	28.4	22.8	23.5	20.6	32.0	15.6	17.7
Unemployed	73.9	73.4	82.2	70.9	82.3	67.2	73.6	73.5	64.5	54.9	82.8	75.4
Weeks unemployed last 12 months:												
10-19 weeks	16.7	15.7	13.2	18.6	17.1	19.3	19.0	18.3	24.3	16.3	12.2	14.1
20-29 weeks	16.3	12.4	20.8	16.8	12.9	16.5	13.6	17.0	15.5	15.5	17.6	18.0
30 or more weeks	41.6	55.5	50.9	35.3	38.4	36.3	29.3	35.3	22.4	35.9	58.1	41.4
Current spell of unemployment:												
10-19 weeks	21.4	20.7	21.4	21.3	20.2	19.6	19.9	23.6	15.3	20.9	23.3	21.9
20-29 weeks	12.6	12.9	15.5	11.4	11.7	13.3	8.9	13.3	8.3	8.8	13.7	17.7
30 or more weeks	28.5%	41.3%	38.1%	28.1%	32.4%	26.8%	21.4%	23.3%	15.3%	27.0%	32.2%	25.0%

[c] Unknown is 20% or more of total.

TABLE A-3

IR Enrollee Characteristics by Type of Training: All States (Fiscal years 1969-71)[a]

Characteristic	Total[b]	Clerical/ Sales	Auto-motive	Weld-ing	Machine Operator	Cosme-tology	Other Repair	Health Occupations		Other
								Non-LPN/RN	LPN/RN	
Sample[c]	3,818	1,161	268	166	40	475	116	202	436	791
Percentage of total	100.0%	31.8%	7.3%	4.5%	1.1%	13.0%	3.2%	5.5%	11.9%	21.6%
Age (in years):										
Average	28.6	29.1	25.9	26.5	27.7	26.3	29.5	28.4	32.5	28.2
Standard deviation	9.7	10.1	8.7	7.3	8.6	7.4	9.3	9.1	11.2	9.7
Sex:										
Male	41.8	11.9	99.2	100.0	100.0	21.9	100.0	13.9	4.6	79.6
Female	58.2	88.1	0.8	0.0	0.0	78.1	0.0	86.1	95.4	20.4
Marital status:										
Married	31.6	20.3	56.8	48.5	62.5	20.6	58.6	20.9	19.7	46.3
Primary wage earner:										
Yes	79.8	76.4	82.0	92.2	75.0	75.8	88.8	74.3	83.7	83.0
Head of household:										
Yes	65.0	64.7	68.5	75.3	67.5	60.5	73.3	58.9	66.3	66.5
Number of dependents:										
No dependents	43.4	42.3	39.7	45.2	37.5	48.2	40.5	45.0	41.7	43.1
1-2 dependents	34.8	36.9	36.3	30.1	20.0	35.8	26.8	35.1	36.3	32.9
3-5 dependents	18.3	17.8	19.4	15.6	35.0	14.7	21.5	16.9	19.2	19.9
6 or more	3.6	3.1	4.5	9.0	7.5	1.3	11.2	3.0	2.8	4.1
Race and ethnicity:										
White	77.4	74.0	87.6	67.5	81.6	76.9	81.4	73.4	85.7	83.0
Negro	17.7	22.5	7.2	9.6	15.8	19.3	15.5	22.9	11.0	11.6
Spanish surname	6.8	5.3	9.7	9.6	5.0	8.8	5.2	2.0	7.6	6.8
Other minority	4.9	3.5	5.2	22.9	2.6	3.8	3.1	3.8	3.4	5.4
Public assistance:										
Yes	20.4	24.5	11.2	19.4	5.0	28.9	6.9	24.3	23.0	13.9
Disadvantaged:										
Yes	71.3%	73.9%	75.7%	84.1%	64.1%	77.3%	62.1%	63.9%	62.8%	65.2%

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[a] Data Collected by Olympus Research Corporation.

[b] Occupation "unknown" for 163 enrollees (4.3% of 3,981 records).

TABLE A-3 (Cont.)

Characteristic	Total[b]	Clerical/ Sales	Auto-motive	Weld-ing	Machine Operator	Cosme-tology	Other Repair	Health Occupations Non-LPN/RN	Health Occupations LPN/RN	Other
Educational attainment:										
8 years or less	5.7%	3.1%	12.2%	22.4%	5.0%	5.3%	7.7%	2.5%	2.6%	5.3%
9-11 years	30.2	26.3	40.6	47.2	42.5	43.9	27.6	18.3	18.4	25.5
12 years or more	64.1	70.6	47.2	30.3	52.5	50.7	64.7	79.2	79.1	69.2
Average	11.3	11.5	10.7	10.0	10.9	11.0	11.2	11.7	11.7	11.5
Standard deviation	1.4	1.2	1.7	1.9	1.4	1.3	1.5	1.3	1.1	1.4
Range	2-18	5-18	3-14	4-14	6-12	6-14	6-16	2-15	7-16	3-16
Years of gainful employment:										
3-9 years	35.9	32.1	34.2	40.4	40.0	33.5	44.3	41.2	42.9	37.0
10 or more	16.0	12.9	16.9	20.5	22.5	8.7	33.0	10.1	17.2	20.8
Hourly wage/last full-time job										
Under $1.50/hr	18.7	24.8	14.1	7.6	5.6	24.4	8.3	18.2	23.3	12.3
$2.50 and over	23.3%	15.6%	29.4%	45.2%	61.1%	12.3%	45.9%	19.9%	9.2%	37.7%
(Average hourly wage)	($2.03)	($1.84)	($2.14)	($2.57)	($2.81)	($1.78)	($2.59)	($1.97)	($1.79)	($2.35)
Income:										
Below poverty level	73.2%	77.7%	76.1%	82.2%	64.1%	75.4%	61.9%	67.7%	69.6%	67.1%
Employment status prior to enrollment:										
Underemployed	21.1	16.5	22.6	10.8	20.0	15.4	19.1	25.2	38.9	23.1
Unemployed	73.9	77.6	69.9	87.3	75.0	78.3	73.9	71.3	58.8	71.9
Weeks unemployed last 12 months:										
10-19 weeks	16.7	14.1	22.4	18.3	25.6	15.6	18.9	15.3	15.8	18.3
20-29 weeks	16.3	13.0	17.8	28.0	5.1	15.4	22.5	16.4	14.4	19.3
30 or more	41.6	52.3	30.9	40.9	38.5	46.5	34.2	39.2	31.4	34.4
Current spell of unemployment:										
10-19 weeks	21.4	20.3	22.5	20.9	22.2	19.2	25.3	19.9	13.5	26.9
20-29 weeks	12.6	12.8	7.3	15.1	14.8	9.5	18.1	15.4	14.3	12.8
30 or more	28.5%	36.7%	17.3%	26.0%	14.8%	33.6%	21.6%	28.7%	25.7%	20.7%

TABLE A-4

IR Enrollee Characteristics for Two ORC Studies (Fiscal years)[a]

	IR Enrollees in 11 States IR/ORC Study				All Enrollees in 14 Cities Skills Shortage/ORC Study			
	1969 (1)	1970 (2)	1971 (3)	1969-71 (4)	1969 (5)	1970 (6)	1971 (7)	1969-71 (8)
Sample[b]	645	1,823	1,350	3,818	1,944	2,732	1,304	5,980
Age (in years):								
Average	30.2%	28.6%	27.8%	28.6%	29.7%	27.3%	26.8%	28.0%
Standard deviation	9.7	9.7	9.6	9.7	9.4	8.9	8.9	9.1
Sex:								
Male	37.5	40.6	45.3	41.8	53.5	50.0	58.8	53.1
Female	62.5	59.4	54.7	58.2	46.5	50.0	41.2	46.9
Marital Status:								
Married	32.7	29.6	33.7	31.6	32.9	31.0	32.6	32.0
Primary wage earner:								
Yes	84.9	79.4	77.9	79.8	78.3	74.3	79.9	76.8
Head of household:								
Yes	68.8	65.5	62.4	65.0	56.1	57.2	58.8	57.2
Number of dependents:								
No dependents	37.7	43.9	45.4	43.4	48.7	53.9	51.6	51.7
1-2 dependents	38.1	34.1	34.1	34.8	28.4	27.5	26.6	27.6
3-5 dependents	19.6	19.0	16.7	18.3	19.7	15.4	18.2	17.5
6 or more	4.7	3.1	3.8	3.6	3.2	3.2	3.6	3.3
Race and ethnicity:								
White	74.6	73.7	83.6	77.4	39.1	37.2	52.1	41.0
Negro	17.7	22.0	11.8	17.7	56.9	59.9	44.1	55.5
Spanish surname	6.7	7.2	6.4	6.8	4.4	7.2	12.2	7.4
Other minority	7.7	4.3	4.6	4.9	4.0	2.9	3.9	3.4
Public assistance:								
Yes	21.2%	23.9%	15.2%	20.4%	14.1%	16.2%	17.5%	15.8%

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[a] Data collected by Olympus Research Corporation.

[b]

TABLE A-4 (Cont.)

	IR Enrollees in 11 States IR/ORC Study				All Enrollees in 14 Cities Skills Shortage/ORC Study			
	1969 (1)	1970 (2)	1971 (3)	1969-71 (4)	1969 (5)	1970 (6)	1971 (7)	1969-71 (8)
Disadvantaged:								
Yes	73.4%	73.5%	67.4%	71.3%	57.9%	61.7%	68.7%	62.4%
Educational attainment:								
8 years or less	6.5	6.7	4.1	5.7	12.9	10.3	9.2	10.9
9-11 years	35.9	31.1	26.2	30.2	47.8	45.2	43.0	45.5
12 years or more	57.6	62.2	69.7	64.1	39.2	44.5	47.8	43.5
Average	11.1	11.2	11.5	11.3	10.6	10.7	10.9	10.7
Standard deviation	1.5	1.5	1.3	1.4	1.8	1.6	1.6	1.7
Range	3-16	2-17	4-18	2-18	1-18	4-16	4-16	1-18
Years of gainful employment:								
3-9 years	34.4	37.5	34.5	35.9	38.4	34.8	35.8	36.2
10 years or more	19.2	14.5	16.4	16.0	19.0	14.4	15.6	16.2
Hourly wage/last full-time job:								
Under $1.50/hr	24.4	15.6	20.0	18.7	25.0	16.7	11.6	18.3
$2.50 and over	15.7	24.5	25.6	23.3	20.1	24.6	19.4	24.1
Average wage	$1.85	$2.09	$2.06	$2.03	$1.90	$2.07	$2.21	$2.05
Income								
Below poverty level	67.9	73.7	75.1	73.2	53.0	59.5	67.6	59.8
Employment status prior to enrollment:								
Underemployed	20.1	20.6	22.3	21.1	16.0	11.3	13.3	13.3
Unemployed	73.9	74.9	72.5	73.9	78.1	71.5	74.4	74.3
Weeks unemployed last 12 months:								
10-19 weeks	17.1	16.5	16.7	16.7	18.1	17.5	16.0	17.3
20-29 weeks	17.1	16.1	16.2	16.3	15.1	18.7	16.8	17.3
30 or more	43.7	40.9	41.5	41.6	35.6	35.9	43.2	37.5
Current spell of unemployment:								
10-19 weeks	23.3	20.7	21.4	21.4	18.7	18.4	18.3	18.5
20-29 weeks	10.4	13.3	12.7	12.6	10.0	12.1	12.1	11.4
30 or more	27.3%	29.4%	28.0%	28.5%	18.9%	26.3%	36.3%	26.3%

TABLE A-5

Public and Private IR Enrollment (Fiscal year 1970)[a]

State	Private Number	Private Percentage	Public Number	Public Percentage	Total[b]
Alaska	32	22%	112	78%	144%
California	263	88	35	12	298
Connecticut	144	79	39	21	183
Louisiana	208	87	30	13	238
Minnesota	160	38	260	62	420
Missouri	119	36	215	64	334
New York	174	80	44	20	218
North Dakota	75	41	108	59	183
Tennessee	82	45	101	55	183
Utah	67	23	227	77	294
Washington	56	15	310	85	366
Wisconsin	11	2	461	98	472%
Typical state	-	46%	-	54%	-

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[a] Data collected by Olympus Research Corporation.
[b] These numbers = 100%.

TABLE A-6

Occupational Offerings within the State of Alaska (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		17		12%		7
A. Draftsman	-				-	
B. Tech. & assts. (nonmed.)	1				1	
C. Health occs.	11		8%		3	
(LPN)	(5)		(3)			
D. Misc.	5				3	
II. Clerical & sales		95		66		10
A. Clerical cluster	87		60		7	
B. Office mach. opr.	1				1	
C. Bkpg. & acctng.	7				2	
D. Money handlers	-				-	
E. Comp./data proc.	-				-	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		22		15		5
A. Food prep. & serv.	-				-	
B. Barbering & cosmet.	4				1	
(cosmetologist)	(4)		(3)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	18		13%		4	
IV. Groundskeeping		-				-
V. Proc. (food/cake dec.)		-				-
VI. Machine trades		-				-
A. Metal mach. & working	-				-	
B. Printing	-				-	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		10		7%		1
A. Automotive cluster	-				-	
B. Truck & heavy equip. mech.	-				-	
C. Aircraft serv.	10				1	
D. Heating & cooling	-				-	
E. Electrical/electronic	-				-	
F. Misc.	-				-	
VIII. Assemblers		-				-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		-				-
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		-				-
A. Welder	-				-	
B. Constr. occs.	-				-	
C. Maint. struct.	-				-	
XI. Miscellaneous		-			-	-
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

[a] Data collected by Olympus Research Corporation.
[b] Total number enrolled = 144.
[c] Total number of occupations = 23.

TABLE A-7

Occupational Offerings within State of California (By DOT clusters; fiscal year 1970)[a]

Occupational Group or Subgroup		Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
		Subgroup	Group	Subgroup	Group	Subgroup	Group
I.	Prof./tech./mngr.		102		30%		14
	A. Draftsman	5				4	
	B. Tech. & assts. (nonmed.)	13				2	
	C. Health occs.	83		24%		7	
	(LPN)	(56)		(16)			
	D. Misc.	2				1	
II.	Clerical & sales		69		20		13
	A. Clerical cluster	41		12		7	
	B. Office mach. opr.	1				1	
	C. Bkpg. & acctng.	5				1	
	D. Money handlers	-				-	
	E. Comp./data proc.	23				5	
	F. Shpg. & rec. stock	-				-	
	G. Misc. clerical	-				-	
	H. Salesperson	-				-	
	I. Whle. salesman	-				-	
III.	Service occs.		21		6		4
	A. Food prep. & serv.	4				1	
	B. Barbering & cosmet.	16		5		2	
	(cosmetologist)	(10)		(3)			
	C. Laundry & clean. serv.	1				1	
	E. Bldg. serv.	-				-	
	F. Misc. serv.	-				-	
IV.	Groundskeeping		2		1		1
V.	Proc. (food/cake dec.)		1		(a)		1
VI.	Machine trades		3		1		2
	A. Metal mach. & working	1				1	
	B. Printing	2				1	
	C. Woodworking	-				-	
	D. Misc.	-				-	
VII.	Mech., repairman, serviceman		116		34		11
	A. Automotive cluster	72		21%		3	
	B. Truck & heavy equip. mech.	-				-	
	C. Aircraft serv.	-				-	
	D. Heating & cooling	6				2	
	E. Electrical/electronic	26				3	
	F. Misc.	12				3	
VIII.	Assemblers		-		-		-
	C. Electronic	-				-	
	D. Wood	-				-	
	E. Misc.	-				-	
IX.	Benchwork		4		1		2
	A. Upholstery	3				1	
	B. Sewing occs.	1				1	
	C. Misc.	-				-	
X.	Structural occs.		18		5		1
	A. Welder	18				1	
	B. Constr. occs.	-				-	
	C. Maint. struct.	-				-	
XI.	Miscellaneous		6		2%		3
	A. Transp. occs.	4				1	
	C. Util./owner occs.	-				-	
	D. Camera-related occs.	1				1	
	E. Misc.	1				1	
	(Horseshoer)	(1)		(d)			

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 342.

[c] Total number of occupations = 53.

[d] Less than 1%

TABLE A-8

Occupational Offerings within State of Connecticut (By DOT clusters; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		21		12%		
A. Draftsman	1				1	6
B. Tech. & assts. (nonmed.)	1				1	
C. Health occs. (LPN)	15 (13%)		9% (7)		2	
D. Misc.	4				2	
II. Clerical & sales		50		29		11
A. Clerical cluster	36		21		7	
B. Office mach. opr.	1				1	
C. Bkpg. & acctng.	4				1	
D. Money handlers	-				-	
E. Comp./data proc.	9				2	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		76		44		3
A. Food prep. & serv.	-				-	
B. Barbering & cosmet. (cosmetologist)	76 (56)		44 (32%)		3	
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	-				-	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		4		2		1
A. Metal mach. & working	-				-	
B. Printing	-				-	
C. Woodworking	-				-	
D. Misc.	4				1	
VII. Mech., repairman, serviceman		-		-		-
A. Automotive cluster	-				-	
B. Truck & heavy equip. mech.	-				-	
C. Aircraft serv.	-				-	
D. Heating & cooling	-				-	
E. Electrical/electronic	-				-	
F. Misc.	-				-	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		-		-		-
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		-		-		-
A. Welder	-				-	
B. Constr. occs.	-				-	
C. Maint. struct.	-				-	
XI. Miscellaneous		23		13%		2
A. Transp. occs.	7				1	
C. Util./owner occs.	16				1	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 174.

[c] Total number of occupations = 23.

TABLE A-9

Occupational Offerings within State of Louisiana (By DOT clusters; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		24		9%		6
A. Draftsman	3				3	
B. Tech. & assts. (nonmed.)	-				-	
C. Health occs.	19		7%		2	
(LPN)	(16)		(6)			
D. Misc.	2				1	
II. Clerical & sales		183		70		11
A. Clerical cluster	136		52		5	
B. Office mach. opr.	20				2	
C. Bkpg. & acctng.	17				2	
D. Money handlers	-				-	
E. Comp./data proc.	10				2	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		44		17		2
A. Food prep. & serv.	-				-	
B. Barbering & cosmet.	44		17		2	
(cosmetologist)	(43)		(16%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	-				-	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		-		-		-
A. Metal mach. & working	-				-	
B. Printing	-				-	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		7		3		6
A. Automotive cluster	1				1	
B. Truck & heavy equip. mech.	-				-	
C. Aircraft serv.	-				-	
D. Heating & cooling	1				1	
E. Electrical/electronic	2				2	
F. Misc.	3				2	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		2		1%		1
A. Upholstery	-				-	
B. Sewing occs.	2				1	
C. Misc.	-				-	
X. Structural occs.		-		-		-
A. Welder	-				-	
B. Constr. occs.	-				-	
C. Maint. struct.	-				-	
XI. Miscellaneous		-		-		-
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 261.

[c] Total number of occupations = 26.

TABLE A-10

Occupational Offerings within State of Minnesota (By DOT clusters; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		126		29%		31
A. Draftsman	19				5	
B. Tech. & assts. (nonmed.)	13				6	
C. Health occs.	47		11%		8	
(LPN)	(35)		(8)			
D. Misc.	46				12	
II. Clerical & sales		124		28		21
A. Clerical cluster	82		19		10	
B. Office mach. opr.	-				-	
C. Bkpg. & acctng.	17				2	
D. Money handlers	1				1	
E. Comp./data proc.	20				4	
F. Shpg. & rec. stock	2				1	
G. Misc. clerical	1				1	
H. Salesperson	1				1	
I. Whle. salesman	1				1	
III. Service occs.		83		19		10
A. Food prep. & serv.	14				3	
B. Barbering & cosmet.	64		15		3	
(cosmetologist)	(61)		(14%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	1				1	
F. Misc. serv.	4				3	
IV. Groundskeeping		2		(d)		1
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		12		3		8
A. Metal mach. & working	6				4	
B. Printing	4				2	
C. Woodworking	1				1	
D. Misc.	1				1	
VII. Mech., repairman, serviceman		68		15		20
A. Automotive cluster	33				5	
B. Truck & heavy equip. mech.	7				1	
C. Aircraft serv.	4				2	
D. Heating & cooling	2				2	
E. Electrical/electronic	14				5	
F. Misc.	8				5	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		2		(d)		1
A. Upholstery	2				1	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		20		5		7
A. Welder	8				2	
B. Constr. occs.	11				4	
C. Maint. struct.	1				1	
XI. Miscellaneous		1		(d)		1
A. Transp. occs.	1				1	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 438.

[c] Total number of occupations = 100.

[d] Less than 1%.

TABLE A-11

Occupational Offerings within State of Missouri (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		228		60%		13
A. Draftsman	3				2	
B. Tech. & assts. (nonmed.)	18				2	
C. Health occs.	207		55%		7	
(LPN)	(180)		(48)			
D. Misc.	3				2	
II. Clerical & sales		41		11		9
A. Clerical cluster	31		8		3	
B. Office mach. opr.	-				-	
C. Bkpg. & acctng.	4				2	
D. Money handlers	-				-	
E. Comp./data proc.	5				3	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	1				1	
I. Whle. salesman	-				-	
III. Service occs.		78		21		4
A. Food prep. & serv.	-				-	
B. Barbering & cosmet.	76		20		3	
(cosmetologist)	(60)		(16%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	2				1	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		-		-		-
A. Metal mach. & working	-				-	
B. Printing	-				-	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		28		7		8
A. Automotive cluster	13				2	
B. Truck & heavy equip. mech.	1				1	
C. Aircraft serv.	3				1	
D. Heating & cooling	6				2	
E. Electrical/electronic	5				2	
F. Misc.	-				-	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		-		-		-
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		2		1%		1
A. Welder	2				1	
B. Constr. occs.	-				-	
C. Maint. struct.	-				-	
XI. Miscellaneous		1		-		1
A. Transp. occs.	-				-	
C. Util./owner occs.	1				1	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 378.

[c] Total number of occupations = 36.

[d] Less than 1%

TABLE A-12

Occupational Offerings within State of New York (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		48		22%		13
A. Draftsman	7				3	
B. Tech. & assts. (nonmed.)	-				-	
C. Health occs.	23		10%		4	
(LPN)	(12)		(5)			
D. Misc.	18				6	
II. Clerical & sales		57		26		14
A. Clerical cluster	22		10		6	
B. Office mach. opr.	1				1	
C. Bkpg. & acctng.	12				2	
D. Money handlers	-				-	
E. Comp./data proc.	22				5	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		44		20		6
A. Food prep. & serv.	1				1	
B. Barbering & cosmet.	41		19		3	
(cosmetologist)	(32)		(14%)			
C. Laundry & clean. serv.	1				1	
E. Bldg. serv.	-				-	
F. Misc. serv.	1				1	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		3		1		2
A. Metal mach. & working	2				1	
B. Printing	1				1	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		42		19		6
A. Automotive cluster	14				2	
B. Truck & heavy equip. mech.	-				-	
C. Aircraft serv.	-				-	
D. Heating & cooling	8				1	
E. Electrical/electronic	18				2	
F. Misc.	2				1	
III. Assemblers		3		1		2
C. Electronic	1				1	
D. Wood	2				1	
E. Misc.	-				-	
IX. Benchwork		1		(d)		1
A. Upholstery	1				1	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		4		2		2
A. Welder	4				2	
B. Constr. occs.	-				-	
C. Maint. struct.	-				-	
XI. Miscellaneous		19		9%		2
A. Transp. occs.	18				1	
C. Util. owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	1				1	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 221.

[c] Total number of occupations = 48.

[d] Less than 1%

TABLE A-13

Occupational Offerings within State of North Dakota (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		26		13%		7
A. Draftsman	-				-	
B. Tech. & assts. (nonmed.)	1				1	
C. Health occs.	18		9%		3	
(LPN)	(16)		(8)			
D. Misc.	7				3	
II. Clerical & sales		65		32		13
A. Clerical cluster	48		24		8	
B. Office mach. opr.	2				2	
C. Bkpg. & acctng.	13				1	
D. Money handlers	-				-	
E. Comp./data proc.	2				2	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		18		9		4
A. Food prep. & serv.	6				2	
B. Barbering & cosmet.	12		6		2	
(cosmetologist)	(10)		(5)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	-				-	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		1		(d)		1
A. Metal mach. & working	1				1	
B. Printing	-				-	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		79		39		7
A. Automotive cluster	57		28%		2	
B. Truck & heavy equip. mech.	7				1	
C. Aircraft serv.	-				-	
D. Heating & cooling	7				2	
E. Electrical/electronic	6				1	
F. Misc.	2				1	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		-		-		-
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		14		7%		2
A. Welder	9				1	
B. Constr. occs.	5				1	
C. Maint. struct.	-				-	
XI. Miscellaneous		-		-		-
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
F. Misc. (Horseshoer)	-				-	

[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 203.

[c] Total number of occupations = 34.

[d] Less than 1%.

TABLE A-14

Occupational Offerings within State of Tennessee (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		39		17%		9
A. Draftsman	7				3	
B. Tech. & assts. (nonmed.)	1				1	
C. Health occs.	28		12		3	
(LPN)	(25)		(11)			
D. Misc.	3				2	
II. Clerical & sales		99		42		10
A. Clerical cluster	89		38		5	
B. Office mach. opr.	-				-	
C. Bkpg. & acctng.	4				2	
D. Money handlers	-				-	
E. Comp./data proc.	6				3	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	-				-	
H. Salesperson	-				-	
I. Whle. salesman	-				-	
III. Service occs.		34		15		2
A. Food prep. & serv.	-				-	
B. Barbering & cosmet.	34		15		1	
(cosmetologist)	(29)		(12%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	-				-	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		16		7		5
A. Metal mach. & working	15				4	
B. Printing	-				-	
C. Woodworking	1				1	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		29		12		8
A. Automotive cluster	15				1	
B. Truck & heavy equip. mech.	-				-	
C. Aircraft serv.	-				-	
D. Heating & cooling	4				2	
E. Electrical/electronic	4				1	
F. Misc.	6				3	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		-		-		-
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	-				-	
X. Structural occs.		16		7%		4
A. Welder	13				2	
B. Constr. occs.	3				2	
C. Maint. struct.	-				-	
XI. Miscellaneous		-		-		-
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

---

[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 233.

[c] Total number of occupations = 38.

TABLE A-15

Occupational Offerings within State of Utah
(By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		72		26%		16
A. Draftsman	11				2	
B. Tech. & assts. (nonmed.)	5				1	
C. Health occs.	49		18%		7	
(LPN)	(37)		(14)			
D. Misc.	27				6	
II. Clerical & sales		97		35		15
A. Clerical cluster	71		26		5	
B. Office mach. opr.	1				1	
C. Bkp[illegible] & acctng.	5				2	
D. Money handlers	-				-	
E. Comp./data proc.	16				4	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	1				1	
H. Salesperson	3				2	
I. Whle. salesman	-				-	
III. Service occs.		5		2		1
A. Food prep. & serv.	-				-	
B. Barbering & cosmet.	5				1	
(cosmetologist)	(5)		(2%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	-				-	
IV. Groundskeeping		-		-		-
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		4		1		3
A. Metal mach. & working	3				2	
B. Printing	1				1	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		44		16		8
A. Automotive cluster	32				3	
B. Truck & heavy equip. mech.	2				1	
C. Aircraft serv.	-				-	
D. Heating & cooling	3				2	
E. Electrical/electronic	-				-	
F. Misc.	7				2	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		1		(d)		1
A. Upholstery	-				-	
B. Sewing occs.	-				-	
C. Misc.	1				1	
X. Structural occs.		52		19%		6
A. Welder	8				2	
B. Constr. occs.	44				4	
C. Maint. struct.	-				-	
XI. Miscellaneous		-		-		-
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 275.

[c] Total number of occupations = 50.

[d] Less than 1%

TABLE A-16

Occupational Offerings within State of Washington (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		95		25%		23
A. Draftsman	7				5	
B. Tech. & assts. (nonmed.)	3				1	
C. Health occs.	75		20%		9	
(LPN)	(58)		(15)			
D. Misc.	9				7	
II. Clerical & sales		182		48		17
A. Clerical cluster	124		33		7	
B. Office mach. opr.	2				2	
C. Bkpg. & acctng.	27				2	
D. Money handlers	-				-	
E. Comp./data proc.	26				3	
F. Shpg. & rec. stock	-				-	
G. Misc. clerical	2				2	
H. Salesperson	1				1	
I. Whle. salesman	-				-	
III. Service occs.		27		7		5
A. Food prep. & serv.	8				2	
B. Barbering & cosmet.	18		5		2	
(cosmetologist)	(16)		(4%)			
C. Laundry & clean. serv.	-				-	
E. Bldg. serv.	-				-	
F. Misc. serv.	1				1	
IV. Groundskeeping		4		1		2
V. Proc. (food/cake dec.)		1		(d)		1
VI. Machine trades		7		2		5
A. Metal mach. & working	5				3	
B. Printing	2				2	
C. Woodworking	-				-	
D. Misc.	-				-	
VII. Mech., repairman, serviceman		34		9		5
A. Automotive cluster	24				2	
B. Truck & heavy equip. mech.	2				1	
C. Aircraft serv.	-				-	
D. Heating & cooling	2				1	
E. Electrical/electronic	6				1	
F. Misc.	-				-	
VIII. Assemblers		-		-		-
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	-				-	
IX. Benchwork		2		1		2
A. Upholstery	1				1	
B. Sewing occs.	1				1	
C. Misc.	-				-	
X. Structural occs.		28		7%		4
A. Welder	25				2	
B. Constr. occs.	3				2	
C. Maint. struct.	-				-	
XI. Miscellaneous		1		(d)		1
A. Transp. occs.	-				-	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	1				1	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 381.

[c] Total number of occupations = 65.

[d] Less than 1%

TABLE A-17

Occupational Offerings within State of Wisconsin (By DOT cluster; fiscal year 1970)[a]

Occupational Group or Subgroup	Number Enrolled[b]		Percentage of Total Enrolled		Number of Different Occupations in Each[c]	
	Subgroup	Group	Subgroup	Group	Subgroup	Group
I. Prof./tech./mngr.		185		32%		31
A. Draftsman	32				3	
B. Tech. & assts. (nonmed.)	15				5	
C. Health occs.	98		17%		12	
(LPN)	(62)		(11)			
D. Misc.	40				11	
II. Clerical & sales		227		40		19
A. Clerical cluster	146		26		7	
B. Office mach. opr.	5				1	
C. Bkpg. & acctng.	29				1	
D. Money handlers	-				-	
E. Comp./data proc.	38				6	
F. Shpg. & rec. stock	3				1	
G. Misc. clerical	1				1	
H. Salesperson	4				1	
I. Whle. salesman	1				1	
III. Service occs.		19		3		9
A. Food prep. & serv.	3				2	
B. Barbering & cosmet.	10		2		2	
(cosmetologist)	(7)		(1%)			
C. Laundry & clean. serv.	-				-	
F. Bldg. serv.	-				-	
F. Misc. serv.	6				5	
IV. Groundskeeping		3		1		1
V. Proc. (food/cake dec.)		-		-		-
VI. Machine trades		28		5		8
A. Metal mach. & working	21				4	
B. Printing	4				2	
C. Woodworking	2				1	
D. Misc.	1				1	
VII. Mech., repairman, serviceman		66		12		16
A. Automotive cluster	40				3	
B. Truck & heavy equip. mech.	2				1	
C. Aircraft serv.	2				2	
D. Heating & cooling	5				3	
F. Electrical/electronic	10				4	
F. Misc.	7				3	
VIII. Assemblers		1		(d)		1
C. Electronic	-				-	
D. Wood	-				-	
E. Misc.	1				1	
IX. Benchwork		8		1		4
A. Upholstery	2				2	
B. Sewing occs.	6				2	
C. Misc.	-				-	
X. Structural occs.		29		5		5
A. Welder	26				3	
B. Constr. occs.	3				2	
C. Maint. struct.	-				-	
XI. Miscellaneous		5		1%		1
A. Transp. occs.	5				1	
C. Util./owner occs.	-				-	
D. Camera-related occs.	-				-	
E. Misc. (Horseshoer)	-				-	

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[a] Data collected by Olympus Research Corporation.

[b] Total number enrolled = 571.

[c] Total number of Occupations = 95.

[d] Less than 1%

TABLE A-18

IR Follow-Up Data by State
(Fiscal year 1970)[a]

Characteristic	Alaska	Calif.	Conn.	La.	Minn.	Mo.	N.Y.	N.D.	Tenn.	Utah	Wash.	Wisc.	Typical State
Performance:													
Number of different occupations	23	52	22	26	100	36	48	34	38	50	65	95	49
Number who failed to enroll	1	58	17	22	52	34	29	0	36	5	18	59	(b)
Number enrolled	144	298	183	238	420	334	218	183	183	294	366	472	278
Completions:													
Percent	65.3	58.0	58.4	66.3	67.0	76.3	67.4	72.0	65.0	68.7	54.0	65.0	65.2
(Number)	(94)	(172)	(107)	(158)	(281)	(255)	(147)	(131)	(119)	(202)	(167)	(305)	NA
Placed:													
Percentage of completions	55.3	(b)	36.4	27.8	41.0	74.9	44.2	50.0	65.0	46.5	43.7	44.0	48.1
(Number)	(52)	(b)	(39)	(44)	(116)	(191)	(65)	(66)	(78)	(94)	(199)	(134)	NA
Training related:													
Percentage of placed	86.5	93.0	87.1	90.9	91.0	97.3	70.7	30.0	51.0	76.5	88.5	69.0	77.6
(Number)	(45)	(27)	(34)	(40)	(105)	(186)	(46)	(20)	(40)	(72)	(87)	(92)	NA
Out of labor force:													
Percentage of completions	9.6	0.5	(b)	8.8	18.0	5.1	4.1	4.0	(b)	14.3	(b)	27.0	10.2
(Number)	(9)	(8)	(b)	(14)	(52)	(13)	(6)	(5)	(b)	(30)	(b)	(25)	NA
Average training weeks:													
Planned	27.0	33.4	39.4	41.9	41.5	41.6	37.4	39.8	49.0	29.4	51.2	42.5	39.3
Actual	25.0	23.6	22.5	32.2	32.5	35.7	27.7	25.8	38.7	24.5	29.6	35.3	28.6
Planned weeks:													
High	52	63	88	104	104	77	58	64	62	56	103	104	NA
Low	(6)	(3)	(2)	(9)	(3)	(4)	(2)	(6)	(6)	(6)	(2)	(4)	NA

NA = Not applicable

[a] Data collected by Olympus Research Corporation.

[b] Data are insufficient or otherwise unusable.

[c] Based on average of three- and six-month follow-ups.

TABLE A-18 (cont.)

Characteristic	Alaska	Calif.	Conn.	La.	Minn.	Mo.	N.Y.	N.D.	Tenn.	Utah	Wash.	Wisc.	Typical State
Follow-up:													
Three months													
Researched:													
Percentage of completers	19.1	52.9	88.7	67.7	93.9	56.8	71.4	84.7	(b)	81.1	(b)	53.1	66.9
(Number)	(18)	(91)	(95)	(107)	(264)	(145)	(105)	(111)	(b)	(164)	(b)	(162)	NA
Contacted:													
Percentage of researched	72.2	63.7	97.9	94.3	89.0	81.3	39.0	96.3	(b)	64.6	(b)	91.3	79.0
(Number)	(13)	(58)	(93)	(101)	(235)	(118)	(41)	(107)	(b)	(106)	(b)	(148)	NA
Employed:													
Percentage of contacted	53.8	43.1	62.3	81.1	67.2	86.4	63.4	70.0	(b)	66.9	(b)	65.5	66.0
(Number)	(7)	(25)	(58)	(82)	(158)	(102)	(26)	(75)	(b)	(71)	(b)	(97)	NA
Six months													
Researched:													
Percentage of completers	19.1	40.7	73.8	66.4	90.7	57.6	68.7	72.5	(b)	72.2	(b)	36.0	59.8
(Number)	(18)	(70)	(79)	(105)	(255)	(147)	(101)	(95)	(b)	(146)	(b)	(110)	NA
Contacted:													
Percentage of researched	66.6	54.2	96.2	87.6	83.5	80.9	35.6	83.1	(b)	69.8	(b)	90.9	74.8
(Number)	(12)	(38)	(76)	(92)	(213)	(119)	(36)	(79)	(b)	(102)	(b)	(100)	NA
Employed:													
Percentage of contacted	83.3	50.0	69.7	79.3	69.4	85.7	63.8	69.0	(b)	65.6	(b)	62.0	69.8
(Number)	(10)	(19)	(53)	(73)	(148)	(102)	(23)	(55)	(b)	(67)	(b)	(62)	NA

NA = Not applicable

[a] Data collected by Olympus Research Corporation.

[b] Data are insufficient or otherwise unusable.

[c] Based on average of three- and six-month follow-ups.

TABLE A-18 (Cont.)

Characteristic	Alaska	Calif.	Conn.	La.	Minn.	Mo.	N.Y.	N.D.	Tenn.	Utah	Wash.	Wisc.	Typical State
Training Costs (to nearest dollar):													
Per student:													
Planned	$ 838	$1,283	$ 783	$ 538	$ 498	$ 413	$ 982	$ 682	$ 334	$ 362	(b)	$ 236	$ 632
Actual	691	1,044	570	440	406	338	852	539	306	309	$ 378	155	502
Planned:													
Highest	2,731	2,918	1,995	1,757	2,400	1,841	2,250	1,251	1,356	1,400	(b)	1,895	NA
Lowest	125	0	15	0	0	0	0	310	9	0	50	0	NA
Per man-year:													
Planned	1,613	1,998	1,034	666	624	517	1,472	891	354	640	(b)	289	918
Actual	1,437	2,300	1,319	710	651	493	1,599	1,086	411	656	648	228	962
Per completer:													
Planned	1,270	2,192	1,337	810	744	531	1,491	945	531	538	(b)	422	983
Actual	793	1,654	962	666	608	437	1,371	750	490	457	680	275	762
Per placed (30 days):													
Planned	2,222	(b)	3,731	2,907	1,802	716	3,740	2,447	926	1,139	(b)	881	2,051
Actual	1,339	(b)	2,731	2,362	1,472	579	3,575	1,573	917	914	(b)	599	1,602
Per employed:[c]													
Actual	1,156	3,549	1,458	830	890	508	2,156	1,079	(b)	689	1,556	431	1,275

NA = Not applicable

[a] Data collected by Olympus Research Corporation.

[b] Data are insufficient or otherwise unusable.

[c] Based on average of three- and six-month follow-ups.

TABLE A-19

Skills Shortage Program Data by City
(Fiscal year 1970)[a]

	City														Typical City
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
Performance:															
Number enrolled	16	19	143	59	350	697	178	50	130	111	189	566	9	168	192
Completions:															
Percent	75	53	59	63	44	62	64	54	80	63	65	63	44	63	61
(Number)	(12)	(10)	(85)	(37)	(153)	(418)	(113)	(27)	(104)	(70)	(122)	(359)	4	(105)	NA
Placed:															
Percentage of completions	50	(b)	(b)	(b)	52	57	66	(b)	46	66	45	53	50	78	56
(Number)	(6)	(b)	(b)	(b)	(80)	(239)	(42)	(b)	(80)	(46)	(55)	(189)	(2)	(82)	NA
Training related:															
Percentage of placed	(b)	(b)	(b)	(b)	91	96	98	(b)	(b)	30	69	100	(b)	(b)	81
(Number)	(b)	(b)	(b)	(b)	(73)	(229)	(41)	(b)	(b)	(14)	(38)	(19)	(b)	(b)	NA
Avg planned training weeks	18	29	36	27	24	22	32	(b)	37	19	32	22	10	23	25
Number of slots	20	19	113	60	342	544	180	(b)	115	105	180	438	20	128	174

NA = Not available

[a] Data collected by Olympus Research Corporation.

[b] Data insufficient or otherwise unusable.

TABLE A-19 (Cont.)

	City														Typical
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	City
Follow-up:															
3 Months															
Researched - number	9	11	58	33	135	149	118	27	58	21	84	265	4	(b)	NA
Contacted:															
Percentage of researched	89	46	90	88	93	50	60	93	50	62	81	86	25	(b)	70
(Number)	(8)	(5)	(52)	(29)	(125)	(74)	(71)	(25)	(29)	(21)	(68)	(227)	(1)	(b)	NA
Employed:															
Percentage of contacted	75	20	63	55	59	65	41	64	48	67	65	44	100	(b)	59
(Number)	(6)	(1)	(33)	(16)	(74)	(48)	(29)	(16)	(14)	(14)	(44)	(99)	(1)	(b)	NA
Training related															
Percentage of employed	100	0	61	(b)	82	67	59	63	(b)	43	(b)	82	100	(b)	66
(Number)	(6)	(0)	(20)	(b)	(61)	(32)	(17)	(10)	(b)	(6)	(b)	(81)	(1)	(b)	NA
6 months															
Researched - number	12	11	44	34	129	156	118	27	69	(b)	58	265	(b)	(b)	NA
Contacted:															
Percentage of researched	58	27	86	91	91	28	53	78	59	(b)	81	74	(b)	(b)	66
(Number)	(7)	(3)	(42)	(31)	(117)	(43)	(62)	(21)	(41)	(b)	(47)	(195)	(b)	(b)	NA
Employed:															
Percentage of contacted	71	33	67	71	59	54	53	76	29	(b)	64	39	(b)	(b)	56
(Number)	(5)	(1)	(28)	(22)	(69)	(23)	(33)	(16)	(12)	(b)	(30)	(77)	(b)	(b)	NA
Training related:															
Percentage of employed	00	0	57	(b)	68	70	61	63	(b)	(b)	(b)	74	(b)	(b)	62
(Number)	(5)	0	(16)	(b)	(47)	(16)	(20)	(10)	(b)	(b)	(b)	(57)	(b)	(b)	NA

NA = Not available

[b] Data insufficient or otherwise unusable.

TABLE A-19 (Cont.)

	City														Typical
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	City
Training costs (to nearest dollar):															
Planned costs:															
HEW total	$29,000	(b)	$134,995	$58,000	$229,000	$695,000	$162,000	$22,937	$131,400	(b)	$161,000	$207,000	$22,000	$157,000	NA
Per student	1,450	(b)	1,195	967	670	1,278	900	(b)	1,143	(b)	894	473	1,100	1,255	$1,030
Per man-year	4,189	(b)	1,745	1,862	1,124	3,020	1,462	(b)	1,606	(b)	1,431	1,169	5,720	2,838	2,379
Per completer	2,417	(b)	1,588	1,568	1,497	1,663	1,434	(b)	1,263	(b)	1,320	577	(b)	1,495	1,482
Per placed (30 days)	4,833	(b)	(b)	(b)	2,862	2,908	3,857	(b)	2,465	(b)	2,927	1,095	(b)	1,915	2,858
Actual costs:															
No. of students (cost basis)	(16)	(b)	(144)	(40)	(350)	(697)	(178)	(b)	(114)	(b)	(191)	(536)	(b)	(179)	NA
HEW total	31,900	(b)	124,165	52,261	236,854	557,450	140,915	(b)	83,814	(b)	137,000	199,992	(b)	186,728	NA
Per student	1,994	(b)	862	1,307	677	800	792	(b)	735	(b)	717	373	(b)	1,043	716
Per completer	2,658	(b)	1,461	1,412	1,548	1,334	1,247	(b)	942	(b)	(b)	557	(b)	1,778	1,165
Per placed (30 days)	5,317	(b)	(b)	(b)	2,961	2,332	3,355	(b)	2,704	(b)	(b)	1,058	(b)	2,277	2,102
Per employed[b]	$ 3,641	(b)	$ 2,248	$ 2,241	$ 2,624	$ 2,223	$ 2,653	(b)	$ 2,415	(b)	(b)	$ 1,326	(b)	(b)	$2,421

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[b] Data insufficient or otherwise unusable.

TABLE A-20

IR Program Data by Occupational Cluster
(Fiscal year 1970)[a, b]

Characteristic	Auto Mechanic	Auto Body	Welding[c]	Production Machine Operator	Office Occupations	LPN	Cosmetology	Other	Total
Performance:									
Number enrolled	38	8	12	5	526	250	212	360	1,411
Percentage of total enrolled	2.6	0.5	0.8	0.3	37.3	17.7	15	25.8	100
Number who failed to enroll	4	1	2	2	25	14	15	39	102
Completions									
Percent	65.7	50.0	75.0	60.0	61.6	81.6	62.7	72.5	68.2
(Number)	(25)	(4)	(9)	(3)	(324)	(204)	(133)	(261)	(963)
Placed									
Percentage of completions	36.0	50.0	55.5	66.0	37.6	79.9	45.1	46.7	50.0
(Number)	(9)	(2)	(5)	(2)	(122)	(163)	(60)	(122)	(485)
Training related									
Percentage of placed	66.6	100.0	80.0	50.0	85.2	96.9	88.3	77.8	87.2
(Number)	(6)	(2)	(4)	(1)	(104)	(158)	(53)	(95)	(423)
Out of labor force									
Percentage of completions[d]	8.0	0.0	0.0	0.0	11.1	4.1	0.5	0.7	7.4
(Number)	(2)	(0)	(0)	(0)	(36)	(8)	(7)	(19)	(72)
Average training weeks									
Planned	32.3	35.5	25.6	38.2	44.9	47.6	39.3	12.1	36.3
Actual	25.1	26.2	18.7	28.4	26.0	40.5	29.3	24.9	28.7
Planned weeks									
High	52	51	50	43	104	52	60	88	104
Low	10	19	9	31	6	34	6	2	2
Follow-Up:									
Three months									
Researched									
Percentage of completers	68.0	50.0	55.5	33.3	68.8	50.9	80.4	67.0	65.8
(Number)	(17)	(2)	(5)	(1)	(223)	(104)	(107)	(175)	(634)

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[a] Data collected by Olympus Research Corporation.
[b] Based on sample of six states.
[c] Based on five states.
[d] Based on three states.

TABLE A-20 (cont.)

	Auto Mechanic	Auto Body	Welding^{c}	Production Machine Operator	Office Occupations	LPN	Cosmetology	Other	Total
Contacted									
Percentage of researched	52.9	100.0	100.0	100.0	77.1	81.7	76.6	66.2	74.4
(Number)	(9)	(2)	(5)	(1)	(172)	(85)	(82)	(116)	(472)
Employed									
Percentage of contacted	55.5	100.0	80.0	100.0	71.5	94.1	60.9	69.8	73.3
(Number)	(5)	(2)	(4)	(1)	(123)	(80)	(50)	(81)	(346)
Six months									
Researched									
Percentage of completers	68.0	75.0	66.6	66.6	59.5	51.4	74.4	65.5	61.8
(Number)	(17)	(3)	(6)	(2)	(193)	(105)	(99)	(171)	(596)
Contacted									
Percentage of researched	58.8	33.0	100.0	100.0	81.3	84.7	70.7	59.6	73.3
(Number)	(10)	(1)	(6)	(2)	(157)	(89)	(70)	(102)	(437)
Employed									
Percentage of contacted	60.0	100.0	66.6	100.0	72.6	93.2	65.7	70.5	75.0
(Number)	(6)	(1)	(4)	(2)	(114)	(83)	(46)	(72)	(328)
Training costs (to nearest dollar):									
Per student									
Planned	$ 569	$ 638	$ 381	$ 627	$ 720	$ 150	$ 571	$ 775	$ 597
Actual	469	539	294	361	593	238	447	557	486
Planned									
Highest	1,154	1,359	898	1,584	2,731	650	1,075	2,550	2,731
Lowest	0	313	0	0	0	0	0	0	0
Per man year									
Planned	920	963	1,099	868	1,096	309	776	1,008	876
Actual	804	965	1,086	1,078	1,169	321^{b}	1,033^{b}	893	912
Per completer									
Planned	901	1,702	508	1,044	1,169	330	913	726	822
Actual	746	1,438	392	602	885	262^{b}	785^{b}	333	538

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[b] Based on five states.

TABLE A-21

IR and Skills Shortage Program Data: Various IR Components[a]
(Fiscal year 1870)

Characteristic	Individual Referrals			IR Total	Skills Shortage
	Private	Public	Cosmetology		
Performance:					
Number enrolled	1,164	1,942	232	278	192
Completions					
Percent	63	67	63	65	61
(Number)	(732)	(1,298)	(146)	NA	NA
Placed					
Percentage of completions	36	51	48	48	56
(Number)	(263)	(662)	(70)	NA	NA
Training related					
Percentage of placed	77	79	89	77	81
(Number)	(202)	(520)	(62)	NA	NA
Out of labor force					
Percentage of completions	6	8	8	10	(b)
(Number)	(42)	(108)	(12)	NA	NA

NA = Not applicable

[a] Data collected by Olympus Research Corporation.

[b] Data are insufficient or otherwise unusable.

TABLE A-21 (cont.)

Characteristic	Individual Referrals			IR	Skills
	Private	Public	Cosmetology	Total	Shortage
Average training weeks					
Planned	40	42	41	39	25
Actual	25	31	33	29	(b)
Planned weeks					
High	100	104	58	NA	NA
Low	2	2	5	NA	NA
Follow-up:					
Three months					
Researched					
Percentage of completions	62	54	71	67	(b)
(Number)	(455)	(703)	(104)	NA	NA
Contacted					
Percentage of researched	75	84	82	79	70
(Number)	(342)	(593)	(85)	NA	NA
Employed					
Percentage of contacted	67	71	65	66	59
(Number)	(228)	(418)	(55)	NA	NA

TABLE A-21 (cont.)

Characteristic	Individual Referrals Private	 Public	 Cosmetology	IR Total	Skills Shortage
Six months					
Researched					
Percentage of completions	56	48	65	60	(b)
(Number)	(410)	(621)	(95)	NA	NA
Contacted					
Percentage of researched	67	85	81	75	66
(Number)	(273)	(528)	(77)	NA	NA
Employed					
Percentage of contacted	71	70	65	70	56
(Number)	(195)	(367)	(50)	NA	NA
Training costs (to nearest dollar):					
Per student					
Planned	$ 931	$ 526	$ 479	$ 632	$1,030
Actual	664	356	396	502	716
Planned					
Highest	3,113	6,532	3,184	NA	NA
Lowest	10	0	0	NA	NA
Per man year					
Planned	2,020	716	597	918	2,379
Actual	1,478	656	597	962	(b)

TABLE A-21 (cont.)

Characteristic	Individual Referrals			IR	Skills
	Private	Public	Cosmetology	Total	Shortage
Per completion					
Planned	1,781	872	936	983	1,482
Actual	1,211	531	649	762	1,165
Fer placed (30 days)					
Planned	3,378	2,970	1,690	2,051	2,858
Actual	2,610	865	1,763	1,602	2,102
Per employee[c]					
Actual	1,755	748	998	1,275	2,421

[b] Data are insufficient or otherwise unusable.

[c] Based on average of three- and six-month follow-ups.

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